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IN
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FOREWORD

The Case Study method, as a valuable instrument in the education and training of administrators has not yet been widely appreciated in India. In 1961, the Indian Institute of Public Administration initiated the Case Study Project. A high power committee on Case Studies was appointed with Shri S. S. Khera, then Secretary to the Union Ministry of Steel, Mines and Fuel as the Chairman. The main aims of the programme were defined by the Committee in these terms : (1) to promote a deeper and wider understanding of the functioning of Indian Administration in its environmental and institutional framework; and (2) to build up a body of systematic knowledge about the administrative process in India. Such information accumulated by the case study method will be useful in two ways : (1) in the teaching of public administration; and (2) in pointing out the necessary improvements in administrative methods and procedures.

The Case Study Project of the Institute received a fillip in 1967, thanks to a generous donation from the Ford Foundation. Under the leadership of Shri K. N. Butani, who was the first Director of the Project and who is now the Director of the Institute of Applied Manpower Research, New Delhi, a large number of case studies by administrators functioning in the various States and different sectors of Public Administration, was commissioned.

At present, the attempt is to consolidate the work done so far, edit the case studies on hand, and publish them in a series of volumes. Earlier this year, two volumes of case studies, entitled "Case Studies in Panchayati Raj" and "New Challenges in Administration" were published. The present volume, the third in the New Series of Case Studies, consists of 9 studies, relating to administration in the fields of industry, agriculture, the public sector, etc. Some of these case studies have been already utilised for purposes of teaching in the training courses conducted at the Institute.

Our thanks are due to the Ford Foundation whose generous grants have been mainly responsible for our achievements in

this field. The Institute is deeply indebted to the members of the Committee on Case Studies, who have displayed a keen and abiding interest in the project. I would also like to take this opportunity of thanking the various case writers, but for whose effort and zeal, this volume would not have been possible.

Dr. Ram K. Vepa, the Honorary Project Director is responsible for the consolidation of the work, and we are extremely grateful to him for his gladly shouldering this onerous task.

NEW DELHI
SEPTEMBER 12, 1972

G. NATH
Director,
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INTRODUCTION

This is the third volume in the new series of Case Studies which the Indian Institute of Public Administration is bringing out for the benefit of students of Public Administration and for use in institutions, training administrators. As in the previous two volumes, the present volume contains a varied fare of problems dealing with several aspects of Public Administration. The emphasis in this volume, as in its predecessors, is on the diverse problems that are met with in practice and the way these problems have been tackled by various administrators. It is not meant to show that the way of tackling any particular problem is unique; perhaps, a number of other alternatives could be considered. What is necessary, however, is to bear in mind the fact that administrative problems do not conform to a single pattern and that, in practice, a wide variety of situations occur, which an administrator would have to face in the course of his career.

An important feature of the present volume is the fact that most of the situations presented in these case studies are a consequence of the new activities which Public Administration has undertaken since Independence. Except, perhaps one (relating to the post of Director of Social Welfare), the rest deal with problems which the administrators of the pre-independent era had hardly to reckon with. New management problems are also becoming a common feature and it is, therefore, of some interest to see how the new class of administrators are facing these problems and, in many cases have solved them successfully. These case studies are a welcome evidence to the continued high calibre of the administrative cadres, in spite of gloomy predictions to the contrary.

The first case study in the volume is about the *Management of a Cooperative Sugar Factory* in Andhra Pradesh; situated in a prosperous delta area, the sugar factory was expected to do extremely well but unfortunately due to quarrels and feuds in the Board of Directors, it was faring badly. A young administrative officer (who had earlier managed a Tribal Development

Corporation)[1] was appointed as the General Manager of the factory and the case study is essentially a recital of the manner in which he brought it up to a satisfactory operation which earned high praise from the Chief Minister of the State. This is a typical instance of the need for a strong sense of commitment and dedication on the part of administrators who are faced with new challenges in the course of their duty.

The next two case studies deal with a public sector undertaking in Andhra Pradesh, the Nizam Sugar Factory at Bodhan which is the largest plant of its kind in Asia. The case study on *Management in Crisis* of Shri G. V. S. Mani makes absorbing reading since it gives an insight into the personnel problems that are a common feature in most public sector undertakings. What is interesting, however, is the way in which a dynamic Chief Executive was able to put through a drastic programme of voluntary retirement, taking full advantage of several factors operating at that time. Perhaps, as the case writer himself admits, the operation was put through successfully partly because of a certain x-factor which is present in every situation and which is commonly called 'luck'. The case study, however, is of great interest since it shows clearly the variety of forces which a young public sector manager will have to contend with in a situation that is certainly more complicated than in the private sector.

The next case study on *The Raising of Working Capital* by Prof. V. V. Ramanadham gives a recital of the problems raised by the restrictions of credit by a major bank in India to the Nizam Sugar Factory and the way in which the undertaking had to look to other sources for providing the credit. These are practical problems that are faced by many public sector undertakings and the case study, therefore, is of particular interest, since it shows the manner in which it has been tackled by a major undertaking.

A few case studies in this volume deal with very important facets of the "Green Revolution" of which so much is heard today. The case study on *The High-Yielding Seeds Production in Maharashtra* has been dealt with by Shri P. R. Dubhashi. The distribution of high-yielding seeds forms the main plank in the programme for increased production and Shri Dubhashi has

[1]See *New Challenges in Administration* (IIPA, New Delhi, 1972) p. 152.

elaborated on the role of the various agencies involved in this process. As he has pointed out, such programmes cannot be implemented merely by giving fiats from a high level authority, whether at the State or the Centre. A number of departments such as the National Seeds Corporation at the Centre, the Directorate of Agriculture at the State level and the *Zilla Parishads* and the District Agricultural Officers at the district level are all involved in putting through a programme of this magnitude. As the case writer has well pointed out : "It is often stated that the implementation of agricultural programmes, as perhaps of others, requires a single line of command and obedience. That this is an over-simplification can be seen from the fact that any such programme involves operations of a multiplicity of agencies which are not always amenable to the application of the principle of unity of command". Shri Dubhashi's study provides an insight into the challenges involved in any major development programme which throws up problems of communication gaps, technical deficiencies, conflicts, overlaps of authority, lack of coordination and timely action. The case study also serves to point out how these problems could be removed or at least minimised so as to make the programme effective.

The case study entitled *Fertilizer Distribution for High-Yielding Variety Progamme in Kanpur* by Shri S. S. Sidhu shows clearly that the ultimate success of the high-yielding variety programme depends on a variety of factors which would need to be taken into account in planning the programme. Unfortunately, too little time is given to district authorities for doing so and they are required to deliver the goods without adequate inputs and the necessary infra-structure. A telling commentary on the continued dependence of Indian agriculture on the monsoon is made by the case writer when he wonders what would have happened if the timely arrival of rains had not occurred. The case study also brings out the fact that quite often district officers are required to go well beyond their legitimate authority to see that a particular programme does not fail.

The success of the agriculture sector in India is ultimately dependent upon the ability of the agricultural education programmes to provide adequate numbers of professionally trained corps of extension workers. Shri P. K. Kathpalia in his case

study, *The Expansion of Agricultural Education in Maharashtra* deals with the programme undertaken in Maharashtra at the under-graduate level in the Third Five Year Plan. Since education is a State level subject, the study brings out the complex relationship between the Centre and the State agencies and also throws light on various aspects of manpower planning, in an area which is primarily the responsibility of the State but where coordination has to be done by the Centre. The case study also brings out the need for accurate data in detailed planning and the importance of continuous communication between the Centre and the State. It reveals also the ability of a State to plan in such areas and the drawbacks in the Central Agency to co-ordinate the State plans.

The case study of *Forging an Industrial Project* by Dr. Ram K. Vepa deals with a project which had a long gestation period which was at one time associated with the name of Dr. Dharam Teja. The case study is interesting in the manner in which a State Agency—the Industrial Development Corporation in this case—was able to rescue the project from certain failure to establish a valuable new asset to the growing industrial economy of Andhra Pradesh. In the case study, the primary interest is on the various factors that tend to operate in a given situation and the pressures which would have to be inevitably faced by any person in pushing through a programme of development.

The next case study is a more traditional one on *The Creation and Abolition of the Post of Director of Social Welfare* by Shri H. R. Trivedi. It is of interest as it reveals the way in which the post was created and the manner in which the person could function for a period of 4 years. At a time when more and more non-officials are being inducted into various levels of administration, the case study brings out some of the administrative problems likely to be encountered in this process.

The final case study on *The Implementation of the Family Planning Programme at the District Level* by Shri S. N. Achanta deals with a sterilisation camp conducted in one of the districts of Andhra Pradesh. It was successful due to the enthusiasm of a few individuals who were dedicated to the programme of Family Planning. The key role played by the District Collector in organising such a camp is well brought out in the report.

Although Family Planning has figured greatly in the official pronouncements, the programme can be successful at the District level only if there are at least a few people who are individually committed to it.

This third volume of case studies presents to the reader a variety of situations and problems. It is hoped that it will serve to stimulate the interest of the young administrator in his profession and also provide an insight into the way in which problems of this type have been met with and solved by his colleagues.

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NEW DELHI
SEPTEMBER 5, 1972.

MANAGEMENT OF A MORIBUND COOPERATIVE SUGAR FACTORY

C. B. RAU

Andhra Pradesh was one of the first States in the country to introduce the cooperative concept in the structure of industrial undertakings, particularly in processing agro-industries like sugar factories and textiles. During 1960-62, it had, as part of this process, started five new cooperative sugar factories, namely, Amadalavalasa, Palakol, Chodavaram, Chittor and Nizamabad. The capacity of all these factories was 1,000–1,250 tonnes per day with an average crushing capacity of 1.5 lakh tonnes per annum. These were started with much fan-fare and high expectations. The management of these undertakings was handed over to non-official Boards of Directors, either nominated by the Government as an interim measure or elected by the share-holders. It was hoped that the non-official leadership and management would be enlightened and dedicated and that the sugar factories would emerge as successful cooperative ventures.

The performance of all the sugar factories except that of Palakol appeared to be reasonably satisfactory. Though they were all running at a loss, they were still able to achieve the maximum of their installed crushing capacity. The Palakol Sugar Factory (PSF) was, ~~however~~, plagued with various problems and its performance during the first three years was abysmally poor. It could crush hardly about 50,000 tonnes in three years as against the installed capacity of 1.5 lakh tonnes per annum. It had accumulated losses of over Rs. 40 lakhs. The creditors, particularly the financing institutions like the Industrial Finance Corporation (IFC) and the Life Insurance Corporation (LIC) were pressing for repayment of their loan instalments and interest, and were even contemplating foreclosure of the loans. The State Bank of India (SBI) was slowly withdrawing the banking facilities which they had originally extended to PSF. The cane growers who were the main-stay

of any sugar factory turned away from the sugar factory and were making jaggery out of their sugarcane, as it was more profitable and less troublesome. Even those sugarcane growers who had no facilities for making jaggery were prepared to transport the cane for supply to distant sugar factories rather than risk supplying it to the near by PSF. The labour was restive and were demanding the implementation of the Sugar Wage Board recommendations which had been already outstanding for nearly 2 years. There were two rival trade unions, and each one was engaged all the time in impressing on the workers that it alone was fighting for their cause and the other was purely an obstructionist union. The sugarcane for the factory had to be brought from a distance of 30-40 miles by lorries. This involved naturally great expense in transportation and loss of sucrose content of the sugarcane in transit. Furthermore, the lorries had to pass over narrow bridges which were considered unsafe for the movement of heavy vehicles. The State Highways Department placed restrictions on the load to be carried by the lorries and, in the case of some bridges, they had completely prohibited the movement of lorries over them. The roads along which lorry loads of sugarcane had to be brought to the factory were practically its arteries and stoppage or restrictions on them were tantamount to paralysing its life-line.

With all these several complex and seemingly insoluble problems, there was no semblance of any leadership or cohesion among the Board of Directors. They were divided into two or three groups and were constantly at loggerheads. The President of the Board of Directors was a Member of the Legislature and belonged to the *Vysyà* community. He became the Chairman of the Board of Directors by virtue of his seniority in politics and his ability to muster enough support among the influential politicians of the area at that time. The majority of the people, however, in the area belonged to the *Raju* (*Kshatria*) community. The Directors belonging to the *Raju* community felt aggrieved that, while they were in the majority in the area as also in the Board of Directors, the management of the sugar factory was not in their hands. They felt that they should capture the management of the factory and replace the Chairman and his group on the Board. The atmosphere in the sugar factory was

Directors also began to champion the interests of a section of the cane growers at the expense of others and the cane growers were also involved in the politics of the sugar factory. The management began to discriminate between the various cane growers in the issue of cutting orders and supplies of cane to the factory. The management followed no system or method in this and was alleged to be wholly arbitrary in its attitude and actions. This led to considerable disgust among the cane growers and many of them stopped supplying sugarcane to the factory. Moreover, the management was also unable to effect prompt payments as prescribed in the statute for the sugarcane supplied by the growers to the factory.

On the Board of the factory, there were two Directors representing the Government. They were the Special Officer for the Cooperative Sugar Factories (Additional Registrar of Cooperative Societies) and the Collector of the District, West Godavari. These two senior Government officers were unable, in the face of the in-fighting among the Directors, to check the rapid decline of the sugar factory. It looked as if PSF was rapidly heading towards total collapse and closure. The Special Officer, CSF and the Registrar of Cooperative Societies (RCS) were alarmed at this prospect. They were afraid that the Government of India and the National Cooperative Development Corporation (NCDC), which channels the aid and loans from the Government of India, would consider the failure of PSF as a setback to the cooperative industrial structure in AP and that this would adversely affect the case of the State Government to set up more cooperative sugar factories.

Government at this juncture decided that there was no alternative except to replace the Board of Directors by an Officer-in-charge (O-in-C) who should take steps to arrest the decline of the factory and rescue it from closure. It had seemed to some people that the person most qualified to undertake this assignment was the Special Officer of the Cooperative Sugar Factories himself. He had been closely associated with the working of PSF and he was most suitable to jump into the fray, as it were, and to take over command of the sugar factory. It was acknowledged by everyone that, whoever took up this assignment, would face a challenge of great complexity and that the person should be one who had some background of working in sugar

factories and of industrial management. Two or three Officers who were sounded by the Chief Secretary (CS) and RCS declined it.

Government then decided to post the then General Manager of Andhra Pradesh Scheduled Tribes Cooperative Finance & Development Corporation as O-in-C of PSF and orders were accordingly issued. The gentleman, who was then an IAS Officer with about 6 years' service, was taken unawares. He was also posted simultaneously as O-in-C of Amadalavalasa Cooperative Sugar factory in place of the Board of Directors. He received orders to report at Hyderabad first, before proceeding to Palakol. He accordingly visited Hyderabad and met the Special Officer, Cooperative Sugar Factories, the Registrar of Cooperative Societies, the Chief Secretary and the Chief Minister. SO (CSF) was in fact surprised that this officer had really come to take over the assignment. He was expecting that this officer too, like others, would evade the posting. RCS was obviously pleased that he had joined. He invited him to tea at his house and told him how important the assignment was and how serious the situation of the sugar factory was. He mentioned that the Chief Minister at one time considered the closure of the factory and consequent liquidation, but was persuaded to give it one more chance by appointing an IAS Officer as O-in-C. RCS told him that he would have the full powers of the Board of Directors and the Chairman and that, if he needed any further powers or authority to set right matters in the factory, he would only have to ask for them and he (RCS) would be too glad to delegate them. RCS also mentioned that he would have his full backing and authority in whatever he did in the factory, but, however, suggested that he should act, as far as possible, on major issues in consultation with the Special Officer and himself. The Chief Minister on whom O-in-C also called mentioned that this was going to be a difficult job and that he hoped that O-in-C would succeed in it. O-in-C then left Hyderabad and proceeded to Palakol to take over charge of the sugar factory.

O-in-C was completely new to industrial management and the only look he had ever of sugarcane fields was from passing trains. He was received at the Railway Station by the General Manager of the Sugar factory who was a Deputy Registrar of the Cooperative Department on deputation to the sugar factory.

He was on the verge of retirement at that time. On the way to the factory he mentioned to O-in-C what a difficult and thankless job he had been doing for over 2 years as the senior-most official in the factory and how his efforts had all along been frustrated by the machinations of the non-official Directors. O-in-C had earlier been told at Hyderabad that GM was considered to be the previous Chairman's man. O-in-C told GM that he would expect his complete cooperation in the difficult task assigned to him by the Government and that he had the authority of RCS to tell him that if GM's performance was satisfactory during the remaining part of his service, RCS would consider giving him either an extension or another assignment. The proffered 'bribe' seemed to have worked. GM, who had a large family, felt immediately grateful and promised O-in-C that he would completely cooperate with him and do his very best.

When O-in-C took charge of the factory, the crushing season had already begun. He had, therefore, no time whatsoever to look around, acclimatise himself, take stock of the situation and to chalk out any strategy or plan of action. It looked to him as if he was thrown from the frying pan of the Corporation into the very fire of the factory. He felt that it was rather unfair on the part of the Government to have asked him to take over that assignment at such a late stage when the crushing season had already begun. SO, CSF who originally had promised to accompany him to Palakol, stay with him for 3-4 days and help him initially in tackling the problems somehow could not make the trip. O-in-C realised that, whether he liked it or not, there was no alternative for him except to face the problems and make the most of the opportunities available. As soon as O-in-C reached the sugar factory guest house, he found that almost all the officers of the factory had already assembled there. He received them one after the other and listened to whatever they had to tell him. He visited the factory immediately afterwards and, with the help of the Chief Engineer and the Chief Chemist of the factory, understood the rudiments of sugarcane crushing and, sugar technology. He also held prolonged discussions with the Cane Development Officer (CDO) who was a Deputy Director, Agriculture on deputation to the factory and who was also on the verge of retirement.

One of the very first decisions that O-in-C took was that he had to get on with the staff and officers given to him and that he had to try to mould them into a harmonious team. He realised that he had no time for effecting any changes and introducing any new blood into the sugar factory at that late juncture.

He also quickly realised that if the factory had to be run, the cane should move in. And that without that, any amount of effort would be of no avail. He recognised that his first task would be to tackle the sugarcane growers and infuse enough confidence in them to supply cane to the factory. During the next ten days, O-in-C undertook an intensive tour of the villages around the sugar factory whence the cane was to come. Wherever he went he was told by the cane growers who were among the most affluent and powerful cultivators in those districts, that they were disgusted with the working of the sugar factory and that it was a hot-bed of intrigues. They blamed not only the previous Board of Directors, but also the officers of the sugar factory and said that the task of supplying sugarcane to the factory was beyond their patience. They plainly told O-in-C that they were even prepared to incur monetary loss in converting sugarcane to jaggery. Such loss in their opinion was preferable to the endless trouble that they had to put up with in supplying cane to the sugar factory, like waiting for the cutting orders, arranging for transport, waiting at the gate of the sugar factory for hours together and inordinate delay in payments for the cane supplied. O-in-C told them that the Government had specially appointed him as O-in-C only with a view to opening a new chapter in the working of the factory. He said that he hoped that they would give him a chance, and that if he too failed, it would not be due to lack of sincerity or effort on his part. He added that it was in their own interest not to allow the sugar factory to be closed and that, if the cane growers did not cooperate with him in rescuing the sugar factory, Government would find it difficult to locate any such ventures in that area in future. He promised to streamline the issue of cutting orders on a rational basis and to ensure that a fair percentage of the cane dues were paid to the growers within a week of the supply of sugarcane even though the statutory period was 15 days. Fortunately, for him, the sugarcane crop in that year was good. The problem was only to persuade the cane growers to supply at least a part

of their produce to the sugar factory instead of converting it into gur or supplying it to distant sugar factories which were unable to crush even the quantity they had contracted to buy. O-in-C assured the growers that they could always personally approach him in case of any difficulties that they had to face and that he would also publicly announce the sequence and system of cutting orders that he would finalise very soon. The visit of O-in-C to the villages had a positive effect on the morale of the cane growers and immediately thereafter a perceptible increase in the supplies to the sugar factory was noticed.

True to his word, O-in-C finalised a new procedure for issuing cutting orders in consultation with the Cane Development Officer and the Assistant Cane Development Officer. He saw to it that there was no element of arbitrariness in this system and he further ensured that the system was based on rational criteria like the variety of sugarcane, the date of planting of the sugarcane, the distance from the factory, membership or otherwise of the society, etc. He got the list published and later discussed it with some of the cane growers and representatives of the Cane Growers' Association and, after discussions with them, made some changes. While there were occasional criticisms against this system, by and large, this system worked to the general satisfaction of the cane growers. In any case, not even the most obstructionist cane grower could allege any discrimination or favouritism in the implementation of the scheme.

The improvement in the supplies of sugarcane to the factory was not the end of the problems. O-in-C was soon told by GM and the Chief Accounts Officer (CAO) that his promise to the cane growers that he would effect substantial payment within a week of supply was a rash promise and it was impossible to keep up this promise as there was already a sizeable accumulation of over-dues for the cane supplied during the previous season and that there was no money for payment as SBI was slowly withdrawing the credit facilities. O-in-C then met the Agent of the local branch of SBI. The Agent told him that in the opinion of their Head Office, VPSF had no future and advancing any more money to it was against the very essentials of banking principles. O-in-C told the Agent that his conclusion was wrong, as it had already been proved by the markedly increased supplies of cane to the sugar factory.

He pointed out that there would be no shortage of cane that year and, with normal crushing, the financial position of the sugar factory would definitely improve to a substantial extent. He asked how SBI, of all the Banks, could be instrumental, in hindering the certain revival of a sugar factory, by denying it credit which is its due. The Agent replied that he would watch the supplies of sugarcane to the factory for some more time before making up his mind whether to recommend any deviation from the policy laid down by his superiors. O-in-C then mentioned that he was able to capture the confidence of the growers by promising, among others, prompt payments and that, if a beginning was not made immediately in that direction, confidence would be lost and the cane growers would never again trust him. The Agent replied that any relaxation could only be a decision at a much higher level and that he could only marginally increase credit facilities to the extent that he was authorised and that, for any further modification, O-in-C would have to approach his superiors ~~at Hyderabad~~. O-in-C thanked him and asked him to increase immediately the credit facilities to the extent he was competent and that he would go ~~to Hyderabad~~ very soon to meet his superior officers. He then instructed GM and CAO of the factory that while he would proceed ~~to Hyderabad~~ in about a week's time, to get the relaxations required, they should mobilise whatever resources they had and start payment to the growers according to his promise. CAO mentioned that if all the money available was mobilised for this purpose, and if SBI did not relax the credit curbs, he would have no money to pay the salaries of the workers in the first week of next month and that this might trigger off serious labour unrest besides violating the labour laws under which the salaries had to be paid within 7 days of the end of the month. O-in-C said that he would take the risk and asked them to prepare the accounts for prompt cane payments and instructed CDO to strengthen the cane department wing by recruiting more hands and diverting more personnel from other branches so that an efficient cane payment wing could be built up which was capable of effecting prompt payments on a regular and sustained basis.

O-in-C also met the trade union representatives. At the very first meeting with the representatives of the two unions,

he told them that, by instinct as well as by training, he was wholly in favour of the trade union movement and would always ensure that the legitimate rights of the unions and the labour were always protected as long as he was at the helm of the affairs of the sugar factory. He asked them why there were two rival unions within the factory and mentioned that this could only result in the detriment of the interests of the labour itself. The trade union representatives evaded a direct answer to this query, but each claimed that it was the only representative trade union of the workers and that the other did not command the confidence of any significant number of workers. Both the unions, however, were critical of the management of the sugar factory and complained that the management was trying to play one against the other to stifle the grievances of the labour and jeopardise their vital interests. They also complained against the inadequate facilities made available to the labour which, they pointed out, was a direct violation of the prescribed provisions of the Factory Act. They mentioned, as examples, the shabby condition of the workers' canteen, inadequate safety measures at the work site, and lack of any quarters for workers. Above all, the trade union representatives complained bitterly of the non-implementation of the Sugar Wage Board recommendations which had been outstanding for over 2 years. They pointed out that the argument of the management that the financial position of the factory would not permit them to do so was specious, since financial constraint did not come in the way of other activities and operations. They complained that only when it came to the workers' legitimate claims, the management took refuge under this argument. O-in-C promised to look into their grievances soon, and asked them to meet him again after about 3 weeks. He, however, appealed to them to extend their sincere cooperation to him and pleaded with them to give him some time to go into these problems in some depth so that he could understand the full implications thereof. He then discussed these grievances with GM, the Labour Officer, and CAO of the factory. They all mentioned that the financial position of the factory had almost reached a stage of near-bankruptcy and that none of the workers' demands, and least of all, the implementation of the Sugar Wage Board recommendations could be met. O-in-C, however, asked them to work out

the financial implications of each of the demands of the workers. He told them that some of their demands like improving the premises of the canteen, better sanitary and security conditions could not be much of a financial liability and he asked them to go ahead and implement them straight away. He pointed out that insanitary conditions and the shabby state of the canteen were against labour laws and the management could be prosecuted for violation of these. As regards the implementation of the Wage Board recommendations, he asked them to work out the detailed financial implications within a period of one month so that he could take these up with the Government.

O-in-C then visited Hyderabad to discuss, in particular with the State Bank authorities, the relaxation of the credit curbs imposed by them. He met the Development Officer and other high officials of the Bank. The Development Officer (DO) who was the key figure in the bank for this purpose told him that he had received a report from his agent regarding the discussions O-in-C had with him and that, while the agent seemed to have been convinced by his argument, he (DO) was not. DO mentioned that he had seen many other cases of this nature where relaxation was given on the advocacy of certain individuals and as a result of which the Agent who agreed to the requests came to grief later. He added that, by the test of any banking principle, PSF was not eligible even to the existing credit facilities, let alone anything more. O-in-C then explained in detail the problems and position of PSF over 3 or 4 sittings with him. He mentioned in particular that, while no doubt PSF may not conform to the accepted traditional banking criteria and principles, it had to be conceded that the performance of the factory even during the month and a half since the beginning of the crushing season had been distinctly better. He pointed out that the crushing during the last one and a half month was practically equal to the entire crushing of the previous two seasons. O-in-C then showed him a statement indicating the financial position of the factory in the event of its being able to crush to its full capacity of 1.5 lakh tonnes and asked DO whether on these assumptions, he would still consider PSF as financially an unsound proposition. He also mentioned that he anticipated no difficulties in cane supplies because of the

excess production of the sugarcane in the area and that, in fact, there was no other go for the cane growers except to supply cane to the factory as (*a*) the jaggery-making capacity was limited and (*b*) the other sugar factories in the area had contracted more cane than they could possibly crush. DO pointed out that it would only mean that the sugar factory had a good chance of getting adequate cane, but that by itself would not be enough. The cane grower might not bring the cane to the factory and might be at the mercy of other sugar factories and jaggery-crushers. According to him, it did not necessarily mean that the sugar factory would be able to organize itself in so short a time to be able to solve all the attendant problems of receiving the cane, crushing it and selling the sugar. O-in-C replied that it was then a matter of judgement about the ability of the management to solve the problems. He pointed out that he had been appointed by the Government for the sole purpose of rescuing the factory, and that he had the full backing of the Government and that it was only but fair that SBI should play its part in reviving the sugar factory. After a great deal of argument, DO ultimately agreed to relax the curbs in a phased manner, depending on the performance of the sugar factory in other respects like ability to attract supplies of cane, and storage and sale of sugar. O-in-C, however, extracted a promise from him that if the sugar factory performed satisfactorily in all other respects, credit would not be allowed to be an inhibiting factor. O-in-C felt greatly relieved and happy about the outcome of the discussions with DO.

O-in-C took the opportunity of his visit ~~to Hyderabad~~ to acquaint SO, Cooperative Societies and RSS with his appraisal of the problems of the sugar factory. He mentioned in particular the Wage Board recommendations and said, that in his view, these had to be implemented quickly not only to gain the confidence of the labour and ensure the smooth working of the factory, but more important, because it was inherently right and just to do so. SO, CSF and RCS were apprehensive whether Government would consider providing the extra expenditure involved in the implementation of the scheme when the survival of the sugar factory itself was not yet certain. O-in-C, however, made it clear that if the Government wanted the sugar factory to be revived, implementation of the Wage Board recommenda-

tions was a 'must' and that without it he would find it impossible to rescue the factory and place it on a sound footing. RCS then asked O-in-C to make a formal proposal with full financial implications so that he could move the Government and take it up at the highest level, if necessary.

O-in-C on his return to Palakol applied himself to other problems attendant on the increased crushing of sugarcane. The infrastructure of the factory like the cane yard where the carts and lorries carrying sugarcane waited for off-loading their cane, the roads leading to and away from the factory, both for the use of carts and lorries, the godown space for the storage of sugar, etc. were hopelessly inadequate to sustain crushing at the installed capacity. This was because of almost negligible crushing during the past 3 years; coupled with lack of funds, it led to the total neglect of these essential facilities. The factory management should have taken up these works on hand before the beginning of the crushing season as they could have then anticipated that there would be no dearth of sugarcane due to the good crop that year. The factory management, originally the Board of Directors and later during the interim period, GM and his team of officers did not either foresee this or ignored it. They might also not have envisaged that any factory management would be able so soon to regain the confidence of the cane growers as to attract cane up to its installed capacity. They had perhaps thought that even with a new management, it would take 2 or 3 years to reach full rated capacity of crushing and that in the meantime supporting infra-structure and services could be built. In reality, however, the crushing picked upto full capacity of 1,000 tonnes per day and some times even more than 1,000 tonnes per day and it was an up-hill task to have the other services and the infra-structure ready in time, to keep pace with the flowing in of cane. O-in-C was, however, determined that under no circumstances was he going to allow any curtailment of the supplies to the factory, as on that would depend not only the day's crushing but the very confidence of the cane growers in the ability of the factory to cope up with the problems. He, therefore, immediately ordered that the cane-yard should be widened by extending it and by levelling up the area and that a small new bridge should be built across the small stream so that the out-ward traffic of carts and lorries need not clash with

the in-ward traffic. He ordered the Civil Engineering Department to take up the task on top priority basis and complete it. It was a stupendous job because the crushing season was on and the factory was working round the clock, and these works had to be undertaken side by side. In spite of the very best efforts, the work could be completed only when about 2/3rd of the crushing season was over. Even so, O-in-C somehow, with the herculean effort of his team of officers, managed to keep the crushing going on and not even on a single day was the quantum of crushing reduced deliberately.

Another difficulty which O-in-C had to face was the meagre godown accommodation; there was not enough room for storing all the sugar bags in the godown. The Central Excise Department objected to storage in any non-pucca accommodation and the Bank was also not agreeable to the sugar bags being stored away from the factory in the town, as the stocks in the godown were under pledge to them. O-in-C then ordered that the roof of the permanent godown might be extended and the space enclosed, thus giving temporary additional accommodation. Bagasse which is a by-product of cane crushing, was dumped on the ground to serve as a *kuccha* flooring and the sugar bags were stored over it. Really, it was a race against time and very often, the roof and the side walls had to be built after the sugar bags were stocked on the floor or simultaneously. Even the offices were shifted to temporary shelters and the accommodation was used for storing sugar bags. In spite of it, the Central Excise Department raised a number of objections and O-in-C had to go to their superior officers at Rajahmundry frequently to persuade them to ignore the slight non-conformity with the rigid Central Excise Laws and regulations. He also persuaded the Agent, SBI to overlook the minor variations of the rigid pledge rules so that crushing could go on unhindered.

O-in-C also realised that, while these were temporary measures, the permanent remedy would be to increase the sales of sugar. The sale of sugar was regulated completely as part of the control of sugar by the Director-General, Sugar and Vanaspati (D G S & V) of the Union Ministry of Food and Agriculture. The sugar release orders were issued directly by him and even the State Government had no hand in it whatsoever. These release orders were issued on an All-India basis, having

regard to the demand and supply in various parts of the country. O-in-C discovered that the release orders of PSF were even less than the average release orders for the other sugar factories in Andhra Pradesh and that even those release orders were not complied with by the parties to whom they were allotted. This was so because of the non-allocation of the required number of railway wagons and very often, these release orders lapsed. In regard to railway wagons, he discovered that PSF had an endemic difficulty. This was the relatively lower priority allotted by the railways for sugar movement in the area. PSF was situated in the heart of the delta area—the granary of south—and higher priority was assigned to rice movement in that area. The years 1964 and 1965 were a period of all-round drought in the country and a significant quantity of rice was exported from these areas to other States in the country. All the available railway wagons were being assigned for the transport of rice, and sugar stood no chance in terms of relative priority. He realised then that it was a fundamental mistake to locate a sugar factory in the heart of the delta area where food grains would always get precedence over sugar for movement.

He then decided that he had somehow to persuade D G S & V to allocate more release orders to PSF and accordingly paid a visit to Delhi. He met the Director-General and his team of Directors and requested them to allocate more release orders to PSF and explained the peculiar circumstances under which PSF was working. DG and the Directors told O-in-C, as expected, that the release orders were based on an All-India basis and they could not possibly disturb the delicate balance between demand and supply in the various parts of the country. They, however, said that they had no objection to increase the allocation to PSF and curtail correspondingly the release orders of other sugar factories within Andhra Pradesh, if the State Government were agreeable. O-in-C told them that this was unlikely to be agreed to by the State Government as this would again disturb the balance between demand and supply within the State and in any case every sugar factory was already pleading that their godowns were full with sugar stocks. After a great deal of persuasion, they agreed to try and increase, to the extent possible, the release orders for PSF. In actual practice, there was some improvement in the release orders of PSF, though not

to the required extent.

O-in-C also met the Secretary of NCDC under the Ministry of Food & Agriculture which was responsible for the working of all the cooperative sugar factories in the country. When O-in-C mentioned that he was in charge of PSF, the Secretary showed him a graph on the wall of his room and pointed out that PSF occupied the lowest position among all the cooperative sugar factories in the country in terms of the quantum of crushing, the repayment of dues to the financial institutions, etc. The Secretary also mentioned that Government of India had been seriously concerned with the inability of PSF to pay the interest and instalments to IFC, to whom they along with the State Government had given a guarantee. IFC had already written to the Government of India, asking them to honour their guarantee. He pointed out that if the Government of India were really forced to honour the commitment, this would seriously affect further assistance from the Central Government to the cooperative industry in the State. It would affect, in particular, the setting up of any more cooperative sugar factories in the State. O-in-C explained the steps he had taken since he took over to improve the performance of the factory and mentioned that it was his expectation that, during that year, the sugar factory would be able to meet its commitment to IFC. He mentioned that this was based on his expectation that the sugar factory would crush to its optimum capacity and further that the sugar factory would get certain excise rebates which the Government of India had announced for early and late crushing.

O-in-C on his return took up with SO, CSF and RCS the possibilities of diverting some release orders from other co-operative sugar factories to PSF. They mentioned that this was not possible as the other sugar factories would protest, particularly as they were under non-official Boards of Directors. In regard to private sugar factories, they would naturally not agree. O-in-C then took up the matter with the railways to see whether it was possible to allocate more railway wagons for the movement of the released stocks. He visited Vijayawada and met the Divisional Superintendent and the other railway officers. They frankly mentioned that they could not allot higher priority than rice for movement of wagons; already there was a hue and cry that enough rice was not being moved

by the railways from those areas to other parts of the country where severe drought conditions were prevailing. The railways, however, mentioned that once in a while, though suddenly, they might be able to allocate a very large number of wagons and that the sugar factory should be able to load them within the stipulated time by organising enough labour and lorries for transport and loading. They mentioned that they would hardly be able to give more than 6-8 hours' notice and, if the sugar factory could load a large number of wagons within 24 hours from then, the problem of the sugar factory could, to some extent, be solved. O-in-C agreed to organise the necessary services for such speedy loading and asked the railway officials to intimate him directly whenever such special allocations could be made. O-in-C accordingly instructed GM and others to keep enough labourers for wagon loading always on hand so that when an emergency call came from the railways, they should be able to mobilise them. He stressed that it was their only chance and that such opportunities should not be lost because of lack of adequate organisational ability on their part. The railways afterwards did allocate a large number of wagons at very short notice and, by and large, the sugar factory was able to load the wagons within the specified time. Very often, O-in-C himself used to be present on the spot to ensure that this was done. The twin measures of marginally increased allocations from DGS & V and the *ad hoc* increased allocation of railway wagons substantially relieved the problem of accumulation of sugar stocks.

Another problem that O-in-C had to tackle during those critical days were the objections of the State Highways Department to allowing the movement of sugarcane-laden lorries over the weak bridges in the district. As mentioned earlier, movement by lorries of sugarcane was really the life-line of PSF and over 50 per cent of the cane was being brought from very distant areas on lorries. When the sugar factory was set up, this was either not envisaged or ignored. The lorries were engaged by the cane growers and the challenging of the lorries *en route,* and stopping them by the State Highways Department was having an adverse effect on the enthusiasm and morale of the cane growers. The cane growers complained to O-in-C that at that rate they would have no choice but to stop supplies to the sugar factory as they

could not be expected to face prosecution in Criminal Courts. O-in-C realised that this was a very serious matter which would thwart all his efforts to sustain the confidence and enthusiasm of the cane growers . He took up the matter with the Collector of the District, but to his surprise he found the Collector rather lukewarm. O-in-C then took up the matter with the Government directly and sent a strong representation against the attitude of the State Highways Department. He pointed out that the issue before the Government was simple, namely, whether or not, they wanted the sugar factory to continue working. He brought home to them the point that, if the sugarcane lorries were not allowed to ply over the bridges, sufficient cane would not reach the factory and PSF would then be crippled and paralysed in its working. O-in-C also pointed out that it seemed to him that all the restrictions about the weight of the lorry were applied only to the lorries transporting sugarcane to the factory; the State Road Transport Corporation buses carrying much more weight than the cane-laden lorries were being allowed to ply over the same weak bridges. O-in-C during one of his visits to Hyderabad met the Secretary and the Joint Secretary in charge of the State Highways Department and impressed on them the fact that it was absolutely necessary to relax the restrictions in favour of the sugar factory, if it were to have any chance of survival. While they were reluctant to agree initially, after a great deal of persuasion they agreed with him but placed a ceiling that the total weight of the lorry including sugarcane should not exceed 7 tonnes. O-in-C realised that this was no relaxation at all as the weight of the lorry itself amounted to about 5 tonnes and each lorry normally carried over 7 tonnes of sugarcane. He represented to the Government again that the relaxation to permit transport of about 7 tonnes of sugarcane should be exclusive of the weight of the lorry and not inclusive of it. The matter then got bogged down in correspondence between the Government, the Chief Engineer, Roads and Buildings, the Collector and O-in-C. Simultaneously, O-in-C approached directly the lower officials of the Highways Department and somehow managed to persuade them to ignore the rigid application of the Government orders. After that, there was practically no difficulty. Thus, a major impediment in the way of the successful working of PSF was removed.

The erstwhile Directors of PSF were all the while keenly watching the efforts of O-in-C. They were hoping that his efforts would fail and that Government would, therefore, be forced to bring back the Board of Directors. They were hoping that they would thus again assume control over the management of PSF. In this view, both the rival groups were of a single mind. The erstwhile Directors had not cared to meet O-in-C when he took over. Nor did he take any initiative in meeting them. He concentrated on direct dealings with the cane growers and the labour and his tactics were visibly succeeding. The former Board of Directors presumably got nervous at the success of the efforts of O-in-C. Some of the Directors tried then to interfere in the affairs of the sugar factory and impede the success of his efforts. One of the former Directors belonging to the former Chairman's group one Sunday visited the sugar factory and came to the residence of O-in-C and complained against the delay in unloading the cane from the carts and lorries and mentioned that there seemed to be no order in the way things were being done in the sugar factory. He complained that cutting orders were being issued indiscriminately for much more than the capacity of the plant and that, consequently, there was heavy accumulation of carts and lorries at the gates of the factory. O-in-C replied that the accumulation of carts and lorries on that day was not because of any excessive cutting orders being issued, but because of a mechanical break-down in the plant. As a result there was no crushing of cane for over 3 hours that day. O-in-C also told the former Director that if he had any specific complaint about the issue of the cutting orders, he was welcome to bring it to the notice of CDO in the first instance. The former Director angrily replied that things seemed to be no better than they were during their regime and there seemed, therefore, to be no reason why the former Board of Directors were replaced by an official. O-in-C replied that, that was a question that he was welcome to put to the Government and that, as far as he was concerned, he had a job to do and he would do it. The ex-Director then complained that things were being done in the factory in a dictatorial manner and there was one-man's rule as against the collective rule by a body of men representing the interests of the cane-growers. O-in-C then replied that the fact of the matter was that the Board had been replaced and an

Officer-in-Charge had been appointed and O-in-C naturally would exercise the powers of the former Board of Directors. The ex-Director then angrily walked off.

It was clear to O-in-C that the outburst of the former Director was in essence a measure of their frustration and the success of his efforts. He could not resist almost feeling inwardly happy. He felt that the ex-Director, no doubt, would convey the conversation to his former colleagues and he was sure that the message would go round that he was not susceptible to threats. O-in-C later learnt that this former Director along with others complained to the Minister against the one-man-rule in the sugar factory as against the earlier collective and representative role. The Minister told the ex-Director that the 'results justified the means'. The Minister himself mentioned this to O-in-C when he met him next.

O-in-C continued to keep in close contact with the cane-growers as he had realised from the very beginning that the success or failure of his efforts would depend on the cooperation that they extended to him and the supplies of cane to the factory. He used frequently to visit the villages and kept up the dialogue with them as a regular measure. The cane growers were soon convinced that O-in-C had no other interests in the factory except to see that it did not decline and die and that their own interests as well as their investments in the society were bound up with the prosperity of the factory.

O-in-C had also to tackle problems of inter-departmental rivalries within the factory. The Chief Engineer and the Chief Chemist, who were the senior-most officers were constantly at logger-heads, each throwing the blame on the other for any break-down in the plant or any steep fall in the recovery content. It was a constant task for O-in-C to maintain a balance between these two warring officers and ensure that, between the two, the interests of the factory did not suffer.

The Chief Chemist, in particular, was an ambitious person and O-in-C learnt that he was in fact siding with one section of the workers and staff. O-in-C then called for all the papers concerning the Chief Chemist. He discovered that the Chief Chemist had joined just about a couple of months before he had joined and even the terms and conditions of his appointment had not yet been finalised. He decided that he would utilise this to discipline

the Chief Chemist. He called the Chief Chemist one day and told him that he and the Chief Engineer should get along with each other in the interests of the factory and that the Chief Chemist should also keep himself above any internal bickerings among the staff and workers so as to command the confidence of all the subordinates under him. O-in-C then casually mentioned about the unsettled terms and conditions of his appointment and enquired why the Chief Chemist was reluctant to sign the contract.

The Chief Chemist replied that he was agreeable to all the terms and conditions except that he wanted a five year contract instead of the three years proposed by the management. O-in-C then replied that three years' contract was quite adequate; he added that he would, besides add one more condition, namely, that the appointment could be terminated with one month's notice on either side or one month's pay in lieu thereof. The Chief Chemist, got visibly worried at this and said that this was totally unacceptable to him as he would never know when he would be given one month's pay and asked to quit. O-in-C replied that this was usually a condition in every contractual appointment and it was a clear mistake on the part of the management not to have incorporated this in the earlier draft sent to him and that any contract between the sugar factory and any employee in future would always contain such a clause.

The Chief Chemist must have regretted his not having accepted the earlier draft. He then said that what he was told then by O-in-C placed a new complexion on the entire transaction and that he needed time to consider his own options and make up his mind. O-in-C then said that he was welcome to do so, but that he wanted a final answer from the Chief Chemist within one week. O-in-C learnt later that the Chief Chemist tried belatedly to see if he could switch over to another sugar factory. The Chief Chemist in fact had earned a reputation for switching over from one sugar factory to another sugar factory every year or two. As it was the middle of the season, his efforts did not seem to have succeeded.

O-in-C was clear in his mind that, if the Chief Chemist did not execute the contract with the new condition, he had to go. After about a week, the Chief Chemist came and told him that he would accept to the draft except that he wanted the notice

on either side to be three months as one month's notice was too inadequate for him to look around elsewhere. O-in-C reiterated what he had told him earlier and said that the contract as finalised by him could not undergo any more changes and that the Chief Chemist would be well advised to execute it in the manner in which it was in the draft. The Chief Chemist then agreed to execute the draft contract agreement between him and the sugar factory. After that, the attitude of the Chief Chemist changed and he was more cooperative than earlier. The relationship between the Chief Chemist and the Chief Engineer also considerably improved thereafter.

O-in-C also began to hold daily meetings in the afternoons with the Chief Chemist, the Chief Engineer, CDO and GM and once a week with all the Shift Engineers and Shift Chemists to supervise closely the day-to-day performance of the sugar factory and to solve any problems or bottlenecks. He used to utilise these occasions not only to question the role performed by each head of the department, but also encourage each one of them to question or criticise in a constructive way the performance of the other heads of departments. He used particularly to review the daily or even the shift recovery, as, on this, depended the economics of the factory. This daily get-together of the heads of departments proved to be very useful in constantly checking the performance of the factory.

O-in-C used to go round the factory at least twice a day and personally supervised, in particular, the unloading of cane so that any bottlenecks that arose were solved on a day-to-day basis. This also enabled him to meet directly the workers, the Shift Engineers and the Shift Chemists. This was very useful as, after sometime, very close relations developed between O-in-C and the staff and workers of the factory. He also used to utilise these occasions to check up the all-important sugar recovery and whenever it was lower than it should have been, he used immediately to discuss it with the Engineers and Chemists and ensured that there was neither inadequate crushing nor inefficient chemical processing.

The workers of the factory were increasingly becoming restive at the non-implementation of the Wage Board recommendations. They used to meet O-in-C frequently and complain that he had not kept his earlier promise of implementing the

recommendations within a month of his taking over as O-in-C. O-in-C had in the meantime asked his GM and CAO to work out the precise financial implications of the implementation. This was taking considerable time as very often even the scales of pay of many posts had to be finalised before implementing the recommendations. In the meantime, the workers began to adopt 'go slow' tactics and the crushing was steeply going down. One day, some workers even tried to sabotage the working of the factory by placing a big-sized piece in the sugar stream so that it would block the passage into the condenser and the entire factory would come to a stop. Fortunately, this was found out in time and was remedied. The atmosphere in the factory became tense and it was clear to O-in-C that, unless the promised implementation of the Wage Board recommendations was made immediately, the situation would get out of hand. He visited the factory more than once, talked to the workers in groups and told them not to adopt the 'go slow' tactics of sabotage as this would only work to the detriment of their own interests. He also decided to pay another visit to Hyderabad to persuade the Government to agree to the implementation of the Wage Board recommendations.

O-in-C took along with him a broad indication of the financial implications which amounted to about Rs. 2 lakhs per annum. He met the Special Officer, Sugar Factories and RCS and told them categorically that, on that issue, would depend the very success or failure of all the efforts made by everyone concerned and that there was no more time to lose and that he wanted to take back with him the approval of the Government to the proposal. SO, CSF and RCS recommended the proposal to the Government. O-in-C then met the Deputy Secretary of the Industries Department who was concerned with CSF and explained to him the whole background and pleaded for immediate orders. The proposal was supported and referred by the Industries Department to the Labour Department who advised that they saw no objection to the implementation of the Wage Board recommendations, provided the sugar factory was able to find the necessary funds from its own resources. The Government intimated the same to O-in-C. This reply was not altogether satisfactory to O-in-C as he had wanted a clear and categorical approval on such a major policy issue. He, however,

realised that this was the maximum that he could expect from the Government and decided to consider that as approval enough to implement the Wage Board recommendations.

O-in-C returned to Palakol with the 'No objection' letter from the Government and at a meeting of the workers and Heads of Departments, he announced his decision to implement with immediate effect the Sugar Wage Board recommendations. This announcement was received with great applause by the workers. The trade unions were not altogether happy that O-in-C announced it directly to the workers. They lodged a mild protest against this. O-in-C told the union representatives that the fact that the unions existed did not abridge his inherent right to talk to the employees of the factory, though he fully recognised that collective bargaining through the unions had a role and function. This, however, did not satisfy the unions and they began to suspect that O-in-C was out to undermine their influence with the workers. The unions from then on were less cordial to him.

O-in-C directed GM and CAO to work out worker-wise the scales of pay in the light of the Wage Board Award within a period of one month. O-in-C had to face many a ticklish issue on deciding the scales of pay, but was able to decide most of the issues to mutual satisfaction.

One of the complicated issues that he had to tackle was in regard to the scale of pay of the Assistant Manager of the Office. The Assistant Manager who was considered close to the Raju group of the former Board was considered a power to reckon with in the regime of the erstwhile Board. He was also thought to be the inspiration of one of the two trade unions in the factory. After the arrival of O-in-C, he, however, remained subdued. O-in-C discovered that this Assistant Manager was in fact a contemporary of his in the University. The Assistant Manager himself mentioned it to him.

O-in-C, while being correct and cordial in his relations with the Assistant Manager, at the same time saw to it that the Assistant Manager did not exploit his name. At the time of implementation of the Sugar Wage Board recommendations, the Assistant Manager once came to O-in-C and mentioned that he had joined the sugar factory after doing his B.Sc. (Hons.) in Physics at the specific request of the previous Chairman and

on the understanding that he would be made GM very soon. The Assistant Manager further mentioned that he had a number of offers from some other concerns including some industries and that he was continuing in the sugar factory at some sacrifice to his personal interests. He added that he would like his designation to be changed to Manager to begin with and that he wanted his scale of pay of Manager mentioned in the implementation of the Wage Board recommendations. O-in-C replied that, in his opinion, the Assistant Manager did a mistake in joining the sugar factory and that this was no place for such a highly qualified person as he. He further advised that if he had other offers and options, he would advise him to take them.

The advice of O-in-C obviously came as a great disappointment to the Assistant Manager, who expected that O-in-C would plead with him to stay on in the sugar factory and further would offer the scale of pay of the Manager. The Assistant Manager then replied that, much as he would like to leave the factory, he could not do so due to certain domestic compulsions, but requested that he may be given the scale of pay of Manager and re-designated as such. O-in-C told the Assistant Manager that, as a matter of policy, he had decided not to raise the scale of pay of any one in the factory in the process of implementation of the Wage Board and that he could not, therefore, make an exception in his case. He added that the question of re-designating him could only arise as a separate issue after the implementation of the Wage Board recommendations. He advised him to put in a separate representation which would be considered later. This decision of O-in-C must have been a matter of great disappointment for the Assistant Manager, but he lumped it as he had no other choice. He knew that outside pressure would not work. The Assistant Manager after the exit of O-in-C was to become a force to reckon with and ultimately achieved his ambition of becoming the General Manager.

There was yet another case of a Shift Chemist who wanted to be re-designated as Deputy Chief Chemist. He brought a measure of political pressure on O-in-C, but he resisted it and told the Shift Chemist that he would not change, as a matter of policy, any designation or scale of pay of any employee in the process of implementation of Sugar Wage Board recommenda-

tions. The Shift Chemist was evidently disappointed, but there was nothing that he could do about it. In this case too, the Shift Chemist later achieved his ambition of becoming the Deputy Chief Chemist after the exit of O-in-C.

The firmness shown by O-in-C in these two cases had become common talk round the factory. The inference was clear and no one else tried to pull wires.

As part of the measures to ameliorate the conditions of the workers, O-in-C sanctioned the construction of a limited number of quarters to begin with. GM and CAO mildly protested against this extravagance and reminded him that the sugar factory could ill-afford to squander away its meagre funds on such profitless ventures. O-in-C reminded them that the successful working of the sugar factory or for that matter any industry would depend on the degree of cooperation that the workers extended to the management and that it was his duty to extend the area of benefits to the workers progressively along with the fortunes of the factory.

O-in-C also sanctioned the necessary funds for the construction of two pucca sugar godowns as storage in temporary accommodation was not only against the excise rules but also damaged some of the sugar bags at the bottom of the heap. He also approved the construction of another molasses tank as molasses, due to inadequate storage capacity, was being let out into open pits as waste. The funds for all these were available out of the proceeds of the sugar sales and with the help of SBI who, after some initial hesitation, came forward to fulfil the promise that, if everything else worked in the factory well, credit would not be allowed to be an inhibiting factor. Even though all the required funds were not immediately available, he felt confident that, at the appropriate time, they would be forthcoming.

While ensuring that the crushing during the season was upto the installed capacity and while taking improvised steps to get the required cane from wherever it was available, O-in-C also initiated action to systematise the cane supplies from the nearer areas for the next season. O-in-C realised that, in the long run, the fortunes of the sugar factory would depend on the supplies of what was called 'gate cane', namely, the cane that was grown within a radius of 5 to 10 miles of the sugar factory and brought

to the sugar factory by carts. This cane would contain the highest sucrose content and was thus capable of giving higher sugar recovery. He noted that the fortunes of any sugar factory would depend ultimately on the percentage of sugar recovery. A one per cent or even 0.5 per cent average increase in the sugar recovery of the season could mean all the difference between profit and loss for a sugar factory. Unfortunately, for PSF, due to its faulty location, it had to depend on the distant cane with consequent loss of sucrose in transit.

Relative economics of paddy and sugarcane cultivation coupled with poor drainage facilities tilted the scales in favour of paddy in the near by areas. The up-land areas were more suitable for sugarcane cultivation as they had better drainage facilities and better yield, particularly because of irrigation by 'filter' points and tube-wells. The difficulty, however, was that up-land areas were nearer to other sugar factories and could not, therefore, be depended upon as reliable and assured sources of supply to PSF. The supplies that this factory had so far were largely because of (*a*) surplus cane in those areas and (*b*) because of certain internal politics among the cane-growers and the management of those sugar factories. It was not certain that these quarrels would forever continue and that, in a scarce year, the management of those factories would not buy them over as the alternative would only be diminished crushing and greater loss to the factory. Also supplies of this cane involved movement by lorries over weak bridges and, even though he was able to solve the problem that year, there was no certainty that at some point of time, the Government would not prohibit all lorry and bus transport; furthermore, there was no certainty that some of the bridges would not indeed collapse bringing the transportation to a complete halt.

O-in-C came to the conclusion that in the long term interests of the sugar factory, cane must be grown around the sugar factory within a radius of 10 miles at the most. He, therefore, directed CDO to localise the areas which were *prima facie* suitable for sugarcane cultivation within a radius of 10 miles and map them out so that those areas could be concentrated upon and the *ryots* persuaded to grow sugarcane instead of paddy. The Cane Department accordingly conducted a localised survey and identified the areas which were *prima facie* suitable for

sugarcane cultivation.

O-in-C then realised that it would be a tough task to persuade them to change over from the traditional paddy cultivation to sugarcane . He, therefore, decided that they must be given some incentive to grow sugarcane. He then formulated a scheme of advancing a loan of Rs. 200 per acre as production finance for cultivation of sugarcane for areas within a range of 5 to 10 miles radius around the sugarcane factory and, for areas within 5 miles radius a loan of Rs. 200 per acre plus a subsidy of Rs. 50 per acre. He announced the scheme without consulting SO of the Sugar Factories and RCS and the Government. He felt that this would only delay matters; moreover, they might water down the benefits extended. As he was fully convinced that this was entirely necessary in the interests of the sugar factory, he did not hesitate to do so. He also knew that if he referred it to RCS or Government, they were certain to object as RBI had been consistently refusing to permit any cooperative society other than the District Central Bank to channelise loans to cultivators.

O-in-C hopefully felt that, with effective and proper implementation of the scheme, there would be significant increase in the acreage under sugarcane close to the factory and that this would gradually change the fortunes and economics of the factory and also make it independent of the distant and uncertain cane from Tanaku area. O-in-C had also planned to convene a meeting of the near by cultivators so that he could persuade them to take to sugarcane cultivation. He instructed CDO, in the meantime, to draw up a list of such potential sugarcane cultivators.

The factory was all the while crushing almost to its full capacity and with all the emergency measures taken for storage of sugar and improvement in the supply of wagons, O-in-C was able to ensure that production was not forced to be curtailed. The sugar recovery was also maintained at an average of over 9 per cent. All this had an electrifying effect on the atmosphere within and around the sugar factory. Everyone heaved a sigh of relief that at last the factory had turned the corner and that there was, therefore, no question of its being closed or liquidated as apprehended barely about five to six months earlier. The implementation of the Wage Board recommendations had

also a stabilising and sobering effect on the labour. Construction programmes like improvements in the cane yard, the construction of workers' houses and construction of sugar godowns and molasses' tanks were also in full swing. The atmosphere in the factory looked cheerful and almost gay. The credit requirements were fully met by SBI as they had also been convinced that PSF was no more doomed to extinction, as they had apprehended earlier. The cane dues were also consistently paid up to 90 per cent within a week or 10 days and this had a tremendous effect on the morale and confidence of the cane growers.

Some of the workers and staff, however, were not quite happy with the refusal of O-in-C not to change their scales of pay or their designations in the context of the implementation of the Wage Board recommendations. The unions never forgave O-in-C for directly announcing the decision to implement the Wage Board recommendations to the workers. A number of them had filed cases in the Industrial Tribunal against the management of PSF. O-in-C felt rather unhappy that the labour did not appreciate his view point as he had fully explained to them on a number of occasions. He, however, felt that it was but natural that workers and unions should try to obtain as many benefits as they could, and that it was equally his responsibility to see that the interests of the sugar factory were safe-guarded, consistent with the legitimate rights of the workers.

By about the middle of April, 1965, PSF for the first time in its chequered history had crushed all the contracted cane. Many growers from distant areas began to approach the factory for taking their cane also, as their own sugar factories were unable to crush. This was a refreshing change from the earlier years when the growers within the zone of PSF were refusing to supply cane to PSF and were transporting it long distances for supplies to other sugar factories. In order to capture the goodwill of these growers also, O-in-C decided to continue crushing till about the middle of May, so long as the recovery was not below the minimum required percentage. The crushing of the sugar factory was ultimately stopped around the middle of May even though more cane was available from distant areas as O-in-C felt that it was no longer economical to crush the cane because of very low recovery due to the intense heat.

O-in-C then reviewed the performance of the sugar factory during that season. The crushing was over and it had crushed about 1,50,000 tonnes. The average recovery for the season was over 9 per cent and this was even more than the recovery of the neighbouring private sugar factories like Tanuku which were known for their efficiency. It was then tentatively estimated that the factory had earned a net profit of about Rs. 5 lakhs after meeting all its obligations including the instalments and interest due to IFC and SBI, and the extra expenditure involved in the implementation of the Sugar Wage Board recommendations and the expenditure on capital works like sugarcane godowns, quarters for the workers, improvement of the cane yard, roads, etc. During that period, the factory had also contracted for over 1.6 lakh tonnes for the next season so that there would be no difficulty for cane even during the next season.

The incentive scheme for growing of sugarcane within a radius of 10 miles was also announced and he hoped it would be implemented from the next season onwards. O-in-C felt satisfied that his efforts had proved successful and there was no more pessimistic talk anywhere about the future of PSF. During the crushing season, a team consisting of representatives of IFC, LIC and NCDC had visited the factory and were more than satisfied about the performance of the sugar factory. Because of the satisfactory performance of the factory during the season, IFC agreed to waive the penal interest of 1 per cent for default in payment of interest and instalments. O-in-C met GM of IFC at Delhi and the Regional Manager at Madras and his efforts had thus succeeded.

After the hectic time of the season, the off-season seemed almost an anti-climax. O-in-C utilized the off-season period to push through the capital works and to get ready for the next season. He had instructed the Chief Chemist and Chief Engineer to clean thoroughly and completely the machinery and take up preventive maintenance, as during the previous season, there were quite a few mechanical break-downs due to inadequate maintenance earlier.

O-in-C then ~~paid a visit to Hyderabad and~~ met SO, CSF, Deputy Secretary, Special Secretary (Industries), RCS, the Chief Secretary and the Chief Minister. All were appreciative about his efforts and performance of the sugar factory during

the previous season. When O-in-C called on the Chief Minister, he congratulated him on the performance of PSF and also of the Amadalavalasa sugar factory which was also under him during that time. The Chief Minister enquired whether O-in-C could say whether PSF had definitely turned the corner or whether it would slip back again if there was a change in the management. O-in-C replied that he did not expect it as the necessary infra-structure and institutional arrangements had been made and there would be no dearth of cane in the next few years at least. CM later mentioned with satisfaction the revival of PSF on the floor of the State Assembly.

A few weeks after his return to Palakol, O-in-C received his transfer orders posting him as a Collector of a District. O-in-C, before relinquishing charge, made an appraisal of the performance of the factory during the one year that he had spent there. He felt a sense of inward satisfaction that, due to his efforts and the efforts of the team of officers who had worked with him, the factory was able to come out of the woods and emerge as one of the successfully run cooperative sugar factories in the country. The factory was able to exceed its production capacity and earn a profit of about Rs. 5 lakhs as estimated tentatively at that time. The sugar factory, which hardly a year back was considered as doomed to liquidation showed a remarkable power of resilience and not only survived, but also exceeded its capacity and achieved a recovery which was even higher than the neighbouring private sugar factories which were generally considered as some of the most efficiently run sugar factories in the State.

O-in-C fully realised that all that was possible only because of the complete cooperation that he received from both the cane growers and the staff and workers of the factory. He also prepared an appraisal on the working of the factory with his suggestions for long term measures and submitted the report to the Government and RCS. In his report, he pointed out that essentially the location of the factory itself was wrong because of the unsuitability of the soil around the factory for sugarcane cultivation. He also pointed out that paddy would always remain a competitor in view of its high yield and alternate double crop and relatively lower yield of sugarcane as compared to up-land areas. He also gave detailed figures to show that profitability

was almost the same as paddy cultivation in the area. The location was also faulty because of the inadequate communications to the factory over weak and narrow bridges. In particular, he recommended to the Government that the most important bridge linking the sugar factory to Palakol town and the sugarcane areas beyond should be immediately taken up for widening and also that the other bridges should be taken up for repairs immediately before the next season started. He also recommended that the factory zone of PSF should be enlarged to cover certain areas whence inevitably cane had to be brought before enough sugarcane was grown around the sugar factory itself.

On completion of about a year's hectic work in PSF, O-in-C relinquished charge. During the period when he worked in PSF, he was simultaneously in charge of yet another factory, namely, Amadalavalasa which was about 200 miles away. It appeared to him, all through, that it was a most irrational arrangement under which one single individual was expected to look after two sugar factories separated from each other by a distance of 200 miles. O-in-C was all along telling RCS that it was a very unsatisfactory arrangement and that, as he was stationed at Palakol, the other sugar factory was bound to suffer to some extent or other. He tried his very best to spend as much time at Amadalavalasa as was possible, but in the very nature of things, he could not do full justice, partly because of distance and partly because of the enormous problems that faced him at Palakol. The problems of Amadalavalasa were also totally different. As he had told the Minister a few weeks after he took over both the sugar factories, his role at Palakol was to do things and at Amadalavalasa to undo things. Amadalavalasa also, however, crushed to almost to its capacity during that year. But the absence of a full time O-in-C on the spot had naturally its effect.

MANAGEMENT IN CRISIS – NIZAM SUGAR FACTORY

G. V. S. MANI

This case study deals with the methods used by the Managing Director of a Government Company in dealing with the considerable number of surplus labour to effect economies at a crucial period in the history of the Company. The whole operation was carried out within a few days and more than 1200 people were asked to retire. The Managing Director did not hesitate to use all possible stratagems to achieve his objective. The focus in the case study is on involvement versus neutrality of bureaucracy in developmental tasks.

The Nizam Sugar Factory is perhaps the largest single sugar company in India with its daily rated crushing capacity at 4200 tons. Its two constituent sugar mills are situated at Shakarnagar in Nizamabad District, 120 miles away from Hyderabad. It owns the single largest block of land (16,000 acres). It operates its own light railway to bring cane to the factory. It manages, on behalf of the Government, a large distillation unit which in performance has been acknowledged as the best in the country. It has a small confectionery unit. The company had an unbroken record of prosperity for 29 years; for a number of years, it declared a dividend of over 20 per cent to its share-holders. Its share capital, the dividend declared and other particulars regarding assets and liabilities are given in Table I ~~(For the accounting period, 1965-66)~~.

Since its inception, the Company was administered by Mr. ~~Laik Ali~~ who subsequently became the Prime Minister of ~~Hyderabad~~ during the turbulent days of the Razakar regime. After him, the Company passed into the control of Mr. ~~Abdul Kareem~~ Babu Khan for nearly 10 years. ~~Mr. Khan~~ was the Managing Agent and Chairman of the ~~Hyderabad~~ Construction Company Ltd., till November 1957 when Government posted a full-time IAS Officer to look after the affairs of ~~NSF~~ ISL by terminating the agency agreement with the ~~Hyderabad~~

Construction Co. Ltd.

TABLE I

Assets and Liabilities of NSF (1965—1966)

Liabilities	Rupees	Assets	Rupees
Share Capital	1,45,92,025	Fixed Assets	2,05,00,413
Reserves & Surplus	1,65,52,591	Land Purchase Suspense	1,50,940
Secured Loans	1,75,32,516	Investments	1,45,443
Current Liabilities and provisions	2,65,38,847	Current Assets, Loans and Advances	5,44,19,183
Total	7,52,15,979	Total	7,52,15,979

Dividend declared on equity shares—12%

In August 1960, the Managing Agency was relinquished by the Government and thereafter, the management of the Company vested with the Board of Directors. Three senior officers of the Government of Andhra Pradesh held charge successively as Managing Directors of the Company before the present incumbent (herein to be called MD) took charge on April 30, 1966. The three predecessors concentrated their energies on the elimination of graft and corruption that had crept into the organization, streamlining the purchase and sales procedures and reducing expenditure on various accounts. It was apparent to one and all that there was considerable over-staffing at all levels in NSF. Originally, this was tolerated and encouraged under the impression of providing a *Ma-Bap* administration. Even during the last days of the Managing Agency when a Wage Board for the sugar industry was set up, anxiety was felt about the constant increase in the wage bill. Table II shows the increase in staff that had taken place over a period of years.

The management had appointed Messrs. IBCONS, Management Consultants in 1956 to undertake a thorough work study of the organisation and make suitable recommendations for improvement. After working for about 6 years, IBCONS produced a series of studies for each division suggesting how work could be rationalised and wages reduced. When it came to implementing these recommendations with determination, the Management found itself handicapped by the activities of the union on the one hand and the silent non-cooperation of

the managerial staff on the other, with the result that the staff strength continued; actually in certain categories, it even increased (Table II). From time to time, the Board of Directors had made half-hearted attempts, to grapple with the situation, but the answer usually was a shrug and a statement that with its prosperity 'NSF could afford it'.

TABLE II

Statement showing increase of staff strength at different periods of time

Department	Strength in '44-'45 when only one plant was functioning	Strength in '48-'49 after the absorption of refugees	Strength in '52-'53 after the starting of 2nd Plant	Strength in '54-'55 before the appointment of IBCONS
Administrative Office	49	98	116	125
Mechanical				405
Electrical	128	269	297	49
Mech. Workshop			84	83
Chemical	73	73	79	104
Cane Supply	74	95	98	114
Cane Transport	..	..	19	19
L.T.S.	120	232	455	364
Civil Engineering		117	189	247
Welfare & Security	43	104	189	175
Medical	19	87	204	186
General Stores	14	41	63	96
Total	520	1116	1793	1967
Plantation	301	425	1359	1899
Grand Total	821	1541	3152	3866

The reasons for this state of affairs were very many. For one thing, the union was getting very powerful and the management tended to play safe. It was not uncommon for several members of the labour union to march into the General Manager's Office and stand up on his desk shouting slogans till the General Manager accepted at least some of their demands.

The tactics resorted to by the union to bolster up their strength were simple. Usually there was a demand for casual labour. At any one point, casual labour was recruited by the Engineer or the Chemist in charge. When once the casual labour came in, they never got disappointed. After a few months, the demand of the union was to make them at least seasonal, if not permanent. So there was a constant movement of labour

from the casual category to the seasonal category and from the seasonal category to the permanent category which had its effect in swelling the wage bill. No doubt, fears were being expressed for the past few years that the Company was fast heading for a crisis.

The crisis came with unexpected suddenness. The Nizamsagar Reservoir which was the life line of the factory zone for agriculture was getting silted up gradually. It was estimated by the experts that the silting had taken place up to 35 to 40 per cent of the total reservoir capacity. This was accompanied by an increase in *ayacut* area of sugarcane and the annual commitment for water. Unfortunately, in between, there were two drought years (1964-65). It was evident, by the middle of 1965, that things had become difficult and the question on everybody's lips was whether it would be possible to save the standing crop for the mills. It became imperative that something should be done but what it was, no one seemed to know.

The then Managing Director decided to tackle the problem of surplus labour. In the beginning of the sugar season of 1965-66, he ordered that no more casual labour should be recruited; at the same time, those who were not really needed should go. Immediately there was a terrific demonstration by the labour. Though production did not suffer, there was a pressure of agitation put up by the union. The General Secretary of the Sugar Factory *Mazdoor Sabha* went on hunger strike and, after a week or so, the management yielded and agreed to the *status quo* being maintained and dropped the plan for rationalisation of staff. This happened in October/November, 1965. The then Managing Director decided that he would leave the rationalisation of staff severely alone and reported to the Board that the management should adopt a policy of retrenchment without tears, *i.e.*, not fill up posts when they fell vacant.

Meanwhile, by March 1966, the area was facing the worst-ever drought. Water was not there even for running the factory and it was evident to one and all that there would be little production of sugar in the coming year and probably the dreaded year of disaster had at last come.

At this time, the new MD, ~~the chief participant in the events narrated in this case-study~~, took charge. To begin with, he was an understudy to the incumbent for a period of six weeks. By

May 1, 1966 he took complete charge as Managing Director.

He was the youngest Managing Director the Company ever had. He had spent about 13 years in the Indian Administrative Service—worked in the Central and State Secretariates and had been District Magistrate of a large district and for the four previous years had held charge as Director of Fisheries of the State. By nature, he was unorthodox in his methods of work and a year's training at Harvard had convinced him that what the administration required was a more sophisticated approach to its problems. He had also learnt methods of forecasting, the value of statistical analysis including the elements of the Games Theory. He was very anxious to find an opportunity of trying out some of these methods and he hoped that this crisis would give him the opportunity to show his mettle. Though he was warned by a number of his senior colleagues and friends that it would be a highly troublesome job, and a job in which he was likely to fail very badly, he had accepted it with no mental reservations and a strong will to succeed at all costs.

A quick survey revealed to him that the problems of NSF could be grouped under the following heads:

(1) Large surplus staff and labour.
(2) A large number of inefficient and disloyal persons on the managerial cadre.
(3) Financial crisis due to shortage of working capital.
(4) Machinery which was either inefficient in its performance or was operated inefficiently.
(5) Drought and low production in the farms.

Any one of these problems was bad enough and serious enough for a Chief Executive. But all the troubles in unison faced MD in the very first month of his taking charge. From the reports that were available to him and from his own observations, he came to realise that a large number amongst the managerial cadre including Engineers and Chemists had to go, if he were to succeed in his job./ He was warned that every one of these persons had developed in the service, horizontal political props, and that it would be extremely difficult to sack them. He was warned that if he came to any head-on collision with these people, it would be he who would have to leave. But MD felt that if he had to succeed elsewhere, at all costs he must draw the first blood amongst the senior personnel and, if a few seniors

were sacked quickly, he would be able to carry out the rest of the plan.

MD decided that he would stake all on his very first throw by moving the Board to dismiss three of the worst persons, namely, the Chief Chemist, an Assistant Chemist and a Shift Engineer. If he could succeed in throwing them out, he would have the initiative on his side but if he failed, then the initiative would pass on to the other side. After a brief discussion with the Chairman who was a senior ICS officer, he moved the Board to terminate the services of these three individuals. There was complete silence when these proposals were mooted before the Board. The Board consisted of 7 officials and 5 non-officials. Generally, the officials would side with the Chairman. Among the non-officials there was one Director who was a member of the Legislative Assembly and known to be close to the Chief Minister. He used to lead the group against the previous incumbent, in public and in private, and his clamour was that the NSF management never took any action on any of his complaints against their officers. By putting this item on the agenda, MD hoped that this Director would give his support and if he withheld his support, MD felt that he could tell him to recall to his mind the number of complaints that he had made to the Chief Minister about NSF. The item, coming last in the agenda, was passed in silence with the Managing Director and the Chairman agreeing to the proposal. It took everyone by surprise as even the agenda note on this item had not been circulated in advance. MD had felt that utmost secrecy was necessary so that the victims would not be able to pull strings. Immediately, orders of removal were typed out and the very next day, MD went to the factory (June 15, 1966) carrying the orders with himself and got them served. This created a terrific commotion in the factory. Such a thing had not happened in the past; three senior men to be removed at one stroke was something of a revolution. The situation was so tense that even the Administrative Officer, who later proved to be a tower of strength to MD, felt it discreet to get away from Shakarnagar on a couple of days' leave, leaving MD all alone in the factory. In spite of all pressures, MD remained firm and the three people had to go. In order to forestall any legal battles, MD called each one of them separately, sympathised with them, and suggested that they

should accept the order and ask for some compensation. He promised that he would put in a word with the Board.

After a fortnight's gap, MD went from Hyderabad to Shakarnagar and decided now to go on his own. He selected three more persons for termination, and called them one by one to the Guest House and, in the presence of their superior officers, offered them the choice of either signing a letter of resignation or receiving a letter of dismissal. The three people, after considerable argument, agreed to sign their letters of resignation. Their exit had the needed effect on the rest of the people. The talk soon centered round the question as to who was the next on the list. Next week, MD summoned two other officers to the Head Office at Hyderabad and made them hand over their letters of resignation. After a gap of another week, he travelled down to Shakarnagar and two more officers were asked to hand over their resignation letters. The process was nerve-racking to MD, his personal staff and the entire Company. The labour union was closely watching his moves. They were completely caught by surprise, as they expected him to move first against wage earners rather than against the Executives. It was their usual practice to go about delivering speeches, naming some of the officers as corrupt and winding up with a warning to the management that unless these corrupt officials were removed, the Company would face ruin. When MD started implementing what they had all along been agitating for, they could not criticise the action of the management, although they feared that the axe was about to fall on them also and it was only a question of time. They were caught in a dilemma. If they protested, their protest would mean backing out of their previous utterances. If they did not, they would lack any argument to advance when their turn came. In fact, it was MD's intention to keep them in suspense till he was ready for them . In one of the meetings with the labour union leaders, this matter of forced resignations came up in a general way. One of the labour union leaders made a feeble protest against the methods adopted by the management. The Managing Director was waiting for the chance. In the presence of half a dozen of his own officers and about a dozen union leaders of three different unions, he said, "How can you protest at my action when some of you yourselves have come to me individually and told me all about the activities of some of

the officers ?" This carefully worded sentence had its calculated effect. The union leaders began to feel that one amongst them was a black sheep and was carrying tales to the Managing Director. In fact, a rumour went round the whole of the Company which every body believed that the Managing Director had been provided with complete data by some of the labour union leaders, and, on that basis, he had drawn up a black-list.

1966 was the election year. The election fever had already started. The Congress party in Andhra Pradesh was hopelessly divided between the ruling and the dissident groups. The Chief Minister faced a very critical situation; there was a threat to his position. The crucial election to the one seat in the Pradesh Election Committee was to decide his fortunes. Both the parties were getting ready for the event and all the politicians and Congress workers were very busy. Almost all Government officers had decided not to initiate any new move during this period, but to carry on the administration with as little commitment as possible, postponing all decisions till the fortunes were decided at the Pradesh Committee Election.

MD, however, thought otherwise. He argued that the time to initiate something spectacular was only when the powers that be were worried over their own fortunes; it was at such a time that one should initiate retrenchment or rationalisation of staff and execute the plan ruthlessly within the shortest period of time. The key element of the strategy should be surprise, and, before second thoughts could prevail, the thing should be done.

Just before MD had taken charge, the Administrative Officer had sent a general proposal on Febuary 19, 1966, outlining a scheme by which people could be voluntarily induced to retire from service. The reception to this proposal had been very cold in the Head Office. After a casual examination, a single line reply was sent to the Administrative Officer on March 11, 1966—"We request you to kindly furnish the total number of employees who are to retire voluntarily and the name, designation and date of appointment, present salary and amount involved, if retirement benefits are extended to enable us to take further action in the matter". The Administrative Officer informed MD orally that it would be very difficult to estimate the total number of employees who would like to retire voluntarily. MD, after taking charge, hunted up the papers and personally formulated a draft

scheme and sent it to the Administrative Officer on May 19, 1966 for his comments. The scheme contained the following terms :

"The present gratuity scheme in force is amended so far as the voluntary retirement scheme is concerned and the quantum of payment will be as under:

"(a) Employees with less than 5 years of continuous service.	25 per cent of their present basic pay for each year of service.
(b) Employees, who have completed 5 years of continuous service but not ten years of continuous service.	25 per cent of their present basic pay for each year of service.
(c) Employees who have completed ten years or more continuous service.	50 per cent of their present basic pay for each year of service.

In addition to the above, they will also be entitled to additional retirement benefit and encashment of privilege leave".

On this, the Administrative Officer suggested that such of the employees who were eligible for gratuity as per rules and who had put in at least a minimum service of 15 years may be offered the incentive of receiving the gratuity amount for the balance period of their service also. This suggestion was turned down by MD as being too expensive, and he decided to stick to his original scheme, which he felt to be beneficial to the employees. He felt that, within a month, the scheme should be pushed through the Board and implemented vigorously. For this, he desired to promote :

(*i*) a general feeling of uncertainty about the company and its prospects, and

(*ii*) a feeling that there was a ruthless management which would stop at nothing to improve the situation faced by the Company.

After the main elements of the scheme were settled, MD decided to have a series of talks with the union leaders. He sent for the recognised union's representatives and met them for the first time. In a few words, he told them bluntly that it was a question of everybody sinking together or at least the majority surviving. A forecast of the next year's probable results had been made and the cost sheets were distributed to all the union

representatives. They were asked to go through them, and come back the next day after consulting their friends. The next day they came but could not offer any suggestions except to reiterate that there should not be any retrenchment. MD agreed that there would not be any retrenchment but there would be retirement and the retirement would be voluntary with compensation and this offer, when made would have to be accepted or retrenchment would follow as a matter of course.

MD felt that, while it was easy to set down a principle, it would involve enormous agony of effort to translate the idea into action. The situation was certainly not a static one. At the best of times, the idea of throwing a number of persons out of employment even with compensation is repugnant to Indian sentiment and, in a place, where firm action had never been taken, it became extremely difficult to carry out these proposals. MD felt that time was running out and, if something was not done during the next few weeks, probably it would never get done at all. Methodically, he checked the attitudes of the various persons who were involved in this decision-making and evaluated their power and forecast their reactions.

In his calculations, the key man who could take a decisive action at any time was the Chief Minister of the State who also happened to be the Minister in charge of the large industries of the State. As he had so many difficulties, it was but natural that the Chief Minister would like to avoid fresh trouble. No doubt he was very keen to get something done to improve things in NSF. In fact, the Chief Minister had told the Managing Director when the latter saw him soon after his appointment that he "should make a thorough cleaning job". But MD knew that the Chief Minister would be very happy, if he succeeded in his attempts; but, with what face could he meet the Chief Minister, if he were to fail? MD would only have stirred a hornet's nest of troubles both for himself and the Chief Minister, if he were to fail. So, MD felt that he should succeed at all costs and that it was better that he acted on his own and took the responsibility himself. He also felt that there was no point in mentioning this to the Chief Minister before hand because there was the danger that the Chief Minister might become alarmed and nip the whole proposal in the bud. On the other hand, with blitzkreig tactics, if he was able to push through the proposals, nobody would be

happier than the Chief Minister.

The second important individual was the Chairman of the Company. A very senior officer, impeccable in his approach, he could be described as a Civil Servant in the best traditions of his service. The Chairman did not subscribe to any of the modern techniques of administrators getting committed or involved. He would like to give his advice and would not care whether it was accepted or not. By temperament, he would not like to rock the boat. MD had an unconscious feeling that the Chairman was slightly unhappy at the way his predecessor had been jockeyed out. Continuous carping criticism, much of it unfounded, by the local politicians and vested interests, was believed to be the reason for transferring the previous incumbent, and the Chairman was understandably unhappy. MD felt that prior consultation with him would mean that he might have to abide by his advice in the matter. Since the Chairman was a model Civil Servant who would not oppose tooth and nail any proposal strongly urged by MD, he felt that it was better to take a chance in the Board without prior consultation.

The third individual was a non-official Director of the Board, and a sitting member of the Legislative Assembly who was supposed to have a great pull with the Chief Minister. This Director was a sitting MLA of Bodhan, the area where the factory was situated and had some connection in a remote way with the labour union. He was generally extra sensitive to the treatment meted out to him. MD felt that this aspect of his character should be exploited and, in the course of a number of trips, he made to the factory in his company, he tried to sell him the idea that some sort of retrenchment or a voluntary retirement scheme had to be implemented. The Director became so enthusiastic with the idea that he soon adopted it as his own and began to feel that it was he who was urging the management for such a move and it was the management which was throwing cold water.

The fourth man whose cooperation was vital to the implementation of the decision was the Administrative Officer of the Sugar Factory. A very intelligent and hard working executive, he was responsible for the coordination of all the work in the factory and the day-to-day administration. The Managing Director felt that the Administrative Officer was highly

professional in his attitude and temperament, in the sense that he was free from any personal sentiments and attachments. He was what the Americans call an excellent hatchet man. The Administrative Officer had just completed one year in his new post and he was to be confirmed. Two courses were open to the Managing Director—either he should hold up the confirmation of the Administrative Officer till the entire voluntary retirement scheme was completed or he could get the Board to confirm him immediately. In fact, there was some objection to his elevation to the Administrative Officer's post and no one was sure whether the present MD would confirm him. MD, on the other hand, decided that he would get him confirmed immediately and count on his personal loyalty. After his confirmation, MD made a frank appeal to the Administrative Officer, asking for his complete cooperation in pushing through the voluntary retirement scheme. The Managing Director argued that it is safer to have a devoted number two, helping him to push through the scheme ruthlessly.

Another element MD had to reckon with was the labour union. His analysis was that the labour union by itself was not important. For one thing, they had been prepared mentally for the blow to come. Secondly, even if they were to go on a strike, it was the off-season for the factory and, if it came to the worst, he could wage a regular fight with the labour union, if all other elements were to be solidly on his side. Moreover, he felt that the union leaders were not averse to horse-trading. In his individual discussions with the union leaders, MD had laid down his cards openly and had given an impression of ruthlessness. Simultaneously, he had assured them that, when, once the voluntary retirement scheme was through, they would find him generous to a fault in respect of some grievances, pending before him. Through the various pipe lines he advised the union leaders to be absent from the factory for 3 or 4 days after the scheme was published, so that they could save their face.

The Board met on July 25, 1966. In order to soften up the Directors, the first forecast of the Company's fortunes for the year was drawn up. It was a telling document, quietly stating that with the existing staff and with the anticipated cane, even with the best of efforts, the estimated loss would be a little more

than a crore of rupees. It also stated that there was a cash flow gap of more than Rs. 110 lakhs. This statement was kept on the table and the Directors were requested to go through it, before they came to grips with the formal agenda, the last item of which was the subject of voluntary retirement scheme. The psychological impact was, as expected. The Directors reeled under the shock and, when they came to the voluntary retirement scheme, they had no criticism to offer. The Chairman agreed with the scheme but he warned that it would be difficult to implement it. MD assured him that he had taken all factors into consideration and the very success of the scheme lay in its timing. One of the Directors, the Finance Secretary to the Government intervened by quietly saying, "The scheme is in the interests of the Company. It is in our own interests to support him and give him encouragement." The non-official Director, primed as he was with the idea that the entire scheme was his own, readily concurred and said that this scheme was long overdue and, in fact, he had been urging the previous Managing Directors to formulate a similar scheme and that, in fact, no body ever paid any attention to his suggestions. So within a few minutes, the scheme was passed by the Board.

The time was late in the evening. Hundreds of cyclostyled copies of the scheme as well as the formal application that each individual had to sign for getting the benefits of the voluntary retirement scheme were prepared. MD, with all these documents, reached the factory by midnight and the next morning, this was put up on the notice board. Just when the scheme was about to be put on the board, MD got another idea. Why not reduce the originally envisaged time limit of one month for people to apply ? Why not have the psychological advantage on the side of the management by making it appear, that the management would withdraw the scheme within a week, whether people applied for the scheme or not ? It should be made to appear, he thought, as if it was a last chance given to the surplus labour to take their benefits and leave, when the going was good. So he introduced a clause that the scheme was limited to only one week and, even during this period, it might be withdrawn at a moment's notice.

On July 26, 1966 early in the morning, MD called for a meeting of all the Heads of Departments and explained to them

the nature of the scheme and stated that the object of the scheme was only to get rid of the surplus staff, but there should not be a brain drain. The Heads of the Departments should resort to arm-twisting tactics and persuade people to apply for the voluntary retirement scheme, and if they found any useful, any intelligent and loyal worker applying for it, he should be discouraged and should, on the other hand, be encouraged to stay on with an offer of an extra increment or promotion in the near future. The question arose as to the quantum of surplus staff. The Industrial Engineer had been at work for two years, trying to apply work study methods to this problem. MD suggested that the total surplus staff should be declared within the next one hour. There was protest all around, but MD called each Head of the Department and fixed his quantum of staff, no doubt arbitrarily, but he explained that he would correct any mistake by sanctioning additional staff, if needed, later. The plan that he followed was to shift as many as possible from the permanent category to seasonal category and reduce the number in the seasonal category. Subsequently, the Industrial Engineer, after 6 months more of calculation by application of work study principles more or less ratified what MD did arbitrarily within one hour.

Notices were pasted and now began the tension of waiting for applicants to pour in. Within one hour there were 10 applicants and by that evening, there were 10 more. MD left the factory with instructions that he should have a daily progress report. The number of people in different categories who applied for the voluntary retirement scheme is given in Table III.

On August 2, 1966, MD returned to Shakarnagar and was satisfied that the response had been quite good, and that the Administrative Officer and his staff had worked hard and loyally and the next day before the labour union leaders returned to Shakarnagar, he withdrew the scheme. By that time, 555 employees from the factory and 478 employees of the plantations had retired under the scheme. He sent a message to the Chairman that, within five days, the voluntary retirement scheme had been implemented successfully. Care was taken to see that there was no report in the Press. In the Head Office, 16 persons left under the scheme. The labour union then came into the picture and they held a number of meetings but by that time, they

were on the defensive. They were not able to give any lead as it was not a retrenchment, and, even if they wanted to stop the workers from applying for the scheme, they would not have succeeded, because the workers felt that cash in hand was better than waiting for the prospects of NSF to improve.

TABLE III

Statement showing the number of employees who retired from different categories under the Voluntary Retirement Scheme

	Officers	Supervisory	Clerical	Highly Skilled	Skilled	Semi-skilled	Un-skilled	Total
1. Adm. Office	2	6	16	..	..	3	11	38
2. Mechanical	2	5	..	4	26	65	40	142
3. Mechanical Workshop	..	..	..	2	16	7	2	27
4. Electrical	..	..	..	2	5	8	..	15
5. Chemical	4	5	..	..	20	3	7	39
6. Cane Supply	1	3	14	..	11	..	6	35
7. General Stores	..	1	8	..	..	3	9	21
8. Civil Engineering	..	..	..	1	12	15	86	114
9. Welfare & Security	..	..	3	..	3	1	24	31
10. L.T.S.	3	3	3	..	43	17	1	70
11. Cane Transport	..	4	..	..	..	1	5	10
12. Medical	2	2	..	..	6	14	30	54
Total	14	29	44	9	142	137	221	596
13. Plantation	1	4	11	..	57	58	367	498
Grand Total	15	33	55	9	199	195	588	1094

The Board of Directors and the Government were amazed that the whole scheme went through without a hitch. Success has many fathers. Everybody congratulated himself and said they always held that a scheme like this should have been implemented long ago.

The Chief Minister was very happy when he learnt of the outcome of the whole scheme. The Chairman's scepticism gave way to pleasure. A few pockets of surplus staff remained. One was in the clerical cadre and the second, in the Civil Engineering section. Cost analysis revealed that the Civil Engineering section spent one rupee on salary and 50 naya paise on substantive work. This was too much a burden to bear but the Civil

Engineering section had been expanded and made permanent only a few years back, and so the incumbents of this department could not be given the benefits of VRS. So after protracted negotiation initiated by MD, 11 masons and 14 women mazdoors were retired, on 8 months' wages offered to them in a lumpsum. Except for a tiny portion, the rest of the section was disbanded completely. MD felt that, even though the terms were little more generous than he would have liked, he was rid of the problem once and for all.

TABLE IV

Staff Strength Before and After VRS

	Factory Permanent	Plantation Permanent	Factory Seasonal	Total
Existing staff before VRS—July, 1966	2,130	1,138	1,645	4,913
Employees who left the service under VRS	596	498	—	1,094
	677	505		1,645
Employees who left the service under normal retirement and termination etc. till 1.6.68	81	7	463	551
Existing staff as on 1.6.68	1,453	633	1,182	3,268

The total wage bill that was saved at the ruling rate was more than 22 lakhs of rupees. The expenditure incurred on payment under VRS was Rs. 20,87,135. In this, the only extra benefit that was paid out was Rs. 10 lakhs by way of *ex gratia* payment. All other benefits were such as were available to anyone retiring even otherwise. So by spending Rs. 10 lakhs, they were able to save an expenditure of Rs. 20 lakhs. Actually, when the accounts were settled the next year, the wage bill was reduced by 30 lakhs of rupees because during this period there were two revisions of the Dearness Allowance and the quantum of increments that would normally have accrued to the incumbents had to be taken into consideration.

The last operation which had to be effected was the reorganisation of the whole set-up. MD felt that the existing set-up was complicated with the line of authority not being quite clear and more than one man doing the same type of work. Above all, there was no Personnel Department which could take into consideration the overall picture of work-load and lay down

the policy for recruitment, training, promotion and take charge of disciplinary proceedings, etc. So a Personnel Department was created by regrouping existing personnel. Similarly, for the light railways, previously there used to be one Loco Transport Superintendent, a Cane Transport Superintendent and a Civil Engineer to maintain and attend to the Light Railway track. Now all the three functions were combined in one department called the Light Railway Department with a Manager at its Head. The Heads of the various departments used to function with fancy designations of officers and superintendents. They were designated managers and assistant managers and managerial responsibilities were defined. On the purchase and stores side, the Purchase Department was in Hyderabad and the Stores were at Shakarnagar. Both were combined into one department called the Stores Purchase Department and an Engineer was posted in charge. The resultant saving was enormous, both in terms of money and speed of decision-making. Financial powers were delegated to all Managers and Heads of Departments and they were asked to take quick decisions. In order to see that the decision-making at a lower level conformed with the overall policy of the Company, an information system was introduced. Budget control statements had to be prepared so that expenditure incurred in every section was intimated to the top management within 24 hours. This entire reorganisation was completed within 15 days from the date of the voluntary retirement scheme.

One bye-product of this was that the Personnel Manager hereafter could cut most of the red-tape involved in disciplinary proceedings by sending for the man and asking him to retire. In this way, nearly 300 seasonal workers were retired in addition, most of whom had a long history of malingering. The labour union also came up with proposals requesting the management to accept the retirement of workers instead of dismissing them.

In a cursory account like this many interesting side lights have to be omitted and it may give the impression that the whole thing was child's play and the labour union was supine. Actually it was far from very simple. Long agonising hours were spent by MD and his personal staff and the Administrative Officer far into the night plotting the various moves. Every type of stratagem was resorted to, including a publicity barrage, and

dissemination of calculated pieces of information through various parties. When it was discovered that in the Guest House there was one employee who was eavesdropping, MD instead of removing him, talked of many things in his presence so that the required information he wanted to be conveyed was duly reported. A very intelligent and efficient labour union leader had applied to the Labour Tribunal for revision of his grade. MD felt that his case was deserving. But though the Administrative Officer was pressing him to issue the orders, he did not do so till the day when the voluntary reitrement scheme was published. The result was that the labour union leader was muzzled; the rank and file had an uneasy suspicion that this man had sold them out for getting a grade for himself. When the labour union leader protested to MD that he did not know what to do with this new order, he was assured that his grade had nothing to do with the labour union activities, and when other members of the labour union made enquiries to find out whether this order was in the way of appeasement, no direct reply was given. This incident weakened the labour union leader completely, enabling the management to push through the scheme vigorously within a few days.

In retrospect, everything seems to have been easy. No doubt every move was calculated, every man's power was evaluated and all resources were used. Ultimately, it was the timing of the scheme, the boldness, the unexpectedness and the quickness of its execution that was responsible for its success. Without the initial ruthless methods taken by MD of eliminating undesirable executives at the top and the barrage of publicity and the creation of an atmosphere of uncertainty, the scheme might not have succeeded. Perhaps even with all this, it may have been a failure without the last element 'Luck'.

THE RAISING OF WORKING CAPITAL BY THE NIZAM SUGAR FACTORY—1960-68

V. V. RAMANADHAM

The Nizam Sugar Factory Limited (NSF) was established on April 17, 1939, a few years after the completion of the Nizamsagar Project, which made cultivation of sugarcane possible on a large scale in the district of Nizamabad. It was set up in the private sector and had a managing agent to start with. However, financial difficulties forced him to sell out his management interest to the Industrial Trust Fund of the erstwhile Government of Hyderabad, within a few months of the registration of the company. The Industrial Trust Fund was a unique feature of the former State of Hyderabad and had for its objects the promotion, financing and management of industries in the State. It nominated the Hyderabad Construction Company Limited as its management representative *vis-a-vis* NSF. This arrangement continued till 1957 when it was replaced by the appointment of a civil servant as the operative director. Next year, the agreement with Hyderabad Construction Company Limited was terminated and the management of NSF was directly taken over by the Government of Andhra Pradesh. It was managed by the Industries Department of the Government till August 15, 1960. The Industrial Trust Fund then gave up its managing agency function; and management was directly taken over by the Board of Directors. The operating director was designated the Managing Director.

Originally, the factory had a crushing capacity of 1,000 tons per day. A second unit was added in 1952, raising the capacity to 3,000 tons of cane per day. So much cane was available in the area that NSF had to expand the capacity of the factory still further.

The year 1961-62 witnessed the completion of another expansion, as a result of which the two units of the factory had increased capacities of 1,750 tons and 2,500 tons per day. NSF is today one of the biggest sugar factories in Asia, and surely the

biggest in India.

A distinct feature of NSF is that for a long time it has had its own farms. At first, it began with an acreage of 1,000, which increased to 16,500 by 1967. Due to its policies of efficient manuring and scientific farming, the average yield of cane per acre, which stood at about 9 tons at the beginning, rose to 40 tons by 1956.

NSF started a confectionery factory in 1958 as a measure of diversification in a technologically related field. A plant for bottling carbon-di-oxide was commissioned in 1964. Besides, NSF was entrusted with the management of the power alcohol factory of the Government of Andhra Pradesh on the basis of a management commission of Rs. 20,000 a year.

The sugar factory is located at Shakkarnagar in Nizamabad District, 112 miles from Hyderabad; the carbon-dioxide plant is also located there. The confectionery factory and the power alcohol factory of the Government of Andhra Pradesh are located at Hyderabad. The head office is at Hyderabad, and functions with a small nucleus staff.

The paid-up capital of NSF stood at Rs. 145.92 lakhs by the end of September 1967. Reserves and surpluses amounted to Rs. 114.74 lakhs, and loans to Rs. 111.49 lakhs. The net depreciated block of fixed assets stood at Rs. 198.32 lakhs on the same date. Seventy two per cent of the capital was held by the Government of Andhra Pradesh. The paid-up capital consisted of 5 per cent (tax free) cumulative preference shares of Rs. 12 lakhs, 4 per cent (tax free) cumulative preference shares of Rs. 23.80 lakhs, ordinary shares of Rs. 68.87 lakhs and some bonus shares.

During 1966-67, the Board of Directors consisted of ten persons including the full-time Managing Director, an I.A.S. officer of the Andhra Pradesh State cadre. Five others held the following positions in the Government of Andhra Pradesh : Secretary, Finance; Secretary, Agriculture; Secretary, P.W.D.; Collector, Nizamabad District; and Chief Engineer, Minor Irrigation. One of the other directors was a retired Registrar of Cooperative Societies; and three were businessmen and industrialists. The maximum number on the Board permitted by the Articles of Association is 15, the minimum being 9.

Tables 1 to 3 respectively indicate certain basic aspects of production, including the quantum of crushing, the different outputs of sugarcane, sugar, confectionery and carbon-di-oxide, and the break-down of profits among the constituent items of production. Some of the data cover a number of years from 1960-61.

TABLE 1
Some Production Statistics of NSF (1960-67)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Season (days worked)							
Factory I	197	139	161	144	179	177	15
Factory II	187	170	163	133	172	175	69
Area planted for the season : (in acres)	5,948	5,870	6,024	6,512	6,324	6,317	5,783
Cane purchased from outside : (tonnes in lakhs)	4.47	3.66	3.41	2.43	4.57	4.45	1.11
Cane crushed (tonnes in lakhs)	6.49	6.00	5.75	4.63	6.26	6.38	1.66
Sugar manufactured (bags in lakhs)	6.52	5.76	5.99	4.72	5.62	5.76	1.32
Recovery (%)	10.05	9.59	10.40	10.21	9.00	9.02	7.91

Source : Annual Reports of the Company.

TABLE 2
Value of Output of NSF (1959-68)
(in lakhs of Rupees)

	Sugar	Sugarcane	Confectionery	Carbon-dioxide	Others (Paddy, etc.)	Total
1959-60	612.14	118.73	4.18	—	1.49	736.54
1960-61	683.03	95.34	4.84	—	2.22	785.43
1961-62	629.12	103.85	5.98	—	2.40	741.35
1962-63	610.07	110.87	12.70	—	2.07	735.71
1963-64	546.45	119.63	13.06	0.07	2.59	681.80
1964-65	675.82	91.98	25.08	0.97	2.40	796.25
1965-66	734.09	105.18	20.69	1.70	2.66	864.32
1966-67	215.55	32.45	29.64	3.11	1.20	281.95
1967-68	670.09	132.08	13.07	1.47	0.79	817.50

It will be useful to note, at the outset, the unique features of NSF's operations, finances and liquidity conditions. These, relating to a sugar factory in general and to NSF in particular,

provide the background of perspective from the angle of financial analysis.

TABLE 3
Internal Profit Structure of NSF (1964-67)
(in Rs. lakhs)

	1964-65	1965-66	1966-67
Agricultural Operations	9.62	13.06	—31.84
Confectionery Department	0.80	—1.17	0.62
Co_2	—0.48	—0.64	—0.62
Sugar	29.26	11.53	—19.07
Total*	39.20	22.78	—50.91

*Profits before tax and proposed dividends.
Source : Annual Reports of the Company.

There is a clear seasonality of expenditure of NSF, as the sugar factory is a seasonal activity, as indicated in Table 4. NSF owns farms which call for outlays on manuring, etc., during certain months of the year when the factory is not at work. Expenditure therefore keeps at a fairly high level during the off-season months of March-May as well. NSF's demand for funds is lowest in June-September and highest in December.

The revenues too have a pattern of seasonality though not so conspicuously as the expenditure; for sugar can be stocked and released for sale throughout the year, though it is produced in four or five months in the year. August—December are relatively poor in revenues; and during January—July, the revenues stay at a uniform level (Table 4).

The seasonality of revenues does not totally tally with that of costs. In certain months of the year, costs are heavy compared to revenues, *e.g.*, in December or April, while in others, the opposite is the situation. The ability of NSF to acquire working capital resources depends greatly on the availability of stocks of sugar for hypothecation; this is highly favourable in the early months after a season and the advantage tapers off as stocks are sold out. Moreover, the revenue earning capacity of NSF during a month is partly dependent on the pattern of releases of sugar stock, which is regulated by governmental control.

TABLE 4
Monthly Expenditure, Revenue and Outstanding Cash Credits
January 67, to December 67
(in Rs. lakhs)

Month	Total Expenditure	Revenue	Cash credit outstanding
January	38.91	44.29	100.51
February	43.68	44.69	99.50
March	46.92	44.69	101.73
April	52.00	44.19	109.54
May	39.41	44.19	104.76
June	34.28	43.69	95.35
July	25.68	43.69	77.34
August	25.92	35.05	68.21
September	36.74	35.05	69.90
October	41.48	34.23	77.15
November	31.20	27.53	80.82
December	73.60	31.60	122.22
Total	489.82	472.89	—

Cash credit outstandings vary from month to month, under these conditions of revenues and costs. In 1967, (Table 4), the highest credits obtained in January-May and in December.

NSF has some of its revenues locked up in several items of current assets, such as spares and debtors; the consequence is that, though its overall financial position is good, its liquidity position may be precarious at times. This is a normal contingency of many industrial enterprises. To the extent that this happens continuously, the management has to arrange for a permanent intake of funds as a continuing cushion for the purpose.

Besides, NSF has followed the policy of meeting certain items of capital expenditure from its working capital resources. This has led to an extraordinary lock-up of capital, and correspondingly complicated its working capital availability.

An interesting feature of NSF's cost structure is that a significant portion of its costs are fixed. An approximate break-up of the costs into fixed and variable constitutents, is indicated in Table 5. As a rough approximation, it may be observed that, in the farm operations, no less than 82 per cent of costs

are fixed in nature; and, in sugar manufacturing, about 59 per cent of all costs are fixed, on the assumption of the cost fixities in their own farms. If we assume the total cost of cane as variable, about 39 per cent of all costs of sugar manufacture are fixed. In actual fact, a sizeable proportion of its cane consumption is drawn from its own farms, entailing the burden of fixity in its cost structure.

TABLE 5
Cost Composition of NSF (1966-67)
(Sugar manufacture including plantation)
(in Rs. lakhs)

Component			Amount
1. Variable Costs :			
(*i*) Cost of cane ..	95.34		
(*ii*) Transport charges on cane	4.41		
(*iii*) Purchase tax on cane ..	5.54		
Total cost of cane	105.29		
Less fixed elements in own farm costs	53.77		
Net Variable costs of cane ..		51.52	
(*iv*) Consumption of stores ..		5.40	
(*v*) Excise duty on sugar ..		48.69	
Total of variable costs			105.61
2. Fixed costs (i.e. other costs) ..			154.75
3. Total costs (1+2) ..			260.36

Source : Annual Reports of the Company.

Factors operating adversely on the size of production and sale revenues place NSF in a handicap of heavy inescapable costs; and the working capital problem is correspondingly rendered difficult. The data on output, shown in Table 2, illustrate the unfavourable impact of the cost structure in certain years, for example, in 1966-67 in particular.

Fixed costs are incurred continuously, irrespective of the production and revenue conditions, from day to day or month to month. Confining ourselves to the salaries, wages, maintenance and such other items as are met in cash from month to month, and ignoring items such as depreciation, which is a matter of policy, and interest, whose time of payment may be managed to a certain extent, we find that, production or no production,

NSF is obliged to incur sizeable amounts of expenditure during the off-season as well—a problem in the realm of securing working capital.

Some of the major influences on the cost structure of NSF, which eventually have an impact on the extent of its working capital requirements in a given period, are mentioned below :

(*i*) The productivity of the farm owned by NSF influences the cost level of its overall activities; and a high consumption of cane for a given unit of sugar output exposes NSF to the difficulty of relatively low income by way of sale proceeds. Further its capacity for hypothecation of stocks gets limited as well.

(*ii*) Difficulties faced in reaching the rated capacity over a full and normal season, because of cane or power scarcity, have a similar effect in scaling down the revenue prospects and the hypothecation facilities, without being accompanied by corresponding curtailments in costs.

(*iii*) The policy of stock releases, which does not totally depend on NSF's own volition and which depends on the changing policies of the government *vis-a-vis* sugar prices, rationing and zonal movements, influences the pattern of cash in-comings through sales.

(*iv*) NSF is periodically subject to the credit policies adopted by the Reserve Bank of India. If, for instance, there is a credit squeeze for the sugar industry as a result of the Reserve Bank's policy in a given year or during certain months of a year, NSF at once faces difficulties in procuring the working capital funds that it needs. This happened in 1964-65.

(*v*) Though yet of minor significance, NSF, like some other industrial enterprises in the country, is allotted export quotas by the government. Indian sugar prices have been far higher than international sugar prices; exports involve losses. To the extent that NSF exports sugar and makes a loss, its sale proceeds stand at a particularly low figure and the pressure on financial resources for working capital mounts up.

(*vi*) NSF has experienced a peculiar cost impact from time

to time with retrospective effect. Enhancements in cane prices to be paid to the farmers are sometimes determined at the end of a period or in a subsequent period. This places on NSF a commitment, in respect of a previous period, of a cost rise which could not be accurately known well in advance of the payment. For instance, the price enhancement for 1959-60 under the revised formula of the Tariff Commission was not made known precisely to NSF, though indications were available to the effect that the revised formula would involve an extra cane price of 30 np. per maund; as late as in the latter half of 1961, NSF had to provide for the payment in respect of the 1959-60 supplies of cane, involving an interim payment of about Rs. 25 lakhs. While experience enables NSF to estimate the approximate provision under this head from year to year, the fact remains that extra funds have to be found at indefinite times and in indefinite amounts.

There are many interesting facets to the efforts that NSF made during the period 1960-68 in securing working capital, from year to year. Briefly, NSF depended for a long time on the State Bank of Hyderabad almost exclusively for cash credits; but by 1966, it found it necessary to look to other sources as well. Simultaneous negotiations were conducted with Tirmumalai Tirupati Devasthanam (TTD) and the Life Insurance Corporation of India (LIC) besides a few banks and the Unit Trust of India (UTI); and a scheme of public deposits was introduced in 1967. These, described in the following sections, will reveal the implications surrounding each source and negotiation and we also get to know the way in which "rules" seriously vitiated an otherwise desirable transaction. Being a public sector undertaking was no particular advantage to NSF in securing working capital funds.

After the narrative, several appendices containing financial and other data are given. For those conversant with accounting statements these constitute a useful part of the case-study. Appendix 1 sums up the balance sheet figures for all years 1960-67; Appendix 2 shows the composition of fixed assets; Appendix 3 indicates the pattern of current assets; Appendix 4 tabulates the secured and unsecured loans; and Appendix 5 shows the

pattern of disposal of net profits.

In 1960, SBH sanctioned NSF a cash credit facility upto Rs. 7 lakhs. (In fact SBH hoped to convert Rs. 75 lakhs out of this overall figure into usance bills, so as to avail of the facility of refinance under a scheme proposed by the State Bank of India to its subsidiary banks. The scheme did not materialise in the end, and the cash credit system continued to operate as before.)

Towards the latter half of 1961, NSF experienced increased needs of working capital and therefore requested SBH to raise the cash credit limit to Rs. 250 lakhs, of which Rs. 20 lakhs was to constitute the DDP* limit. The margins agreed upon were as follows : 10 per cent on sugar stocks pledged to SBH under its lock and key, 30 per cent on movable assets and 45 per cent on stocks of sugar stored in depots and other places.

While the cash credit of Rs. 250 lakhs was valid up to the end of July 1962, NSF realised by April that year that its cost commitments had expanded so much that it should request SBH for cash credit facilities up to Rs. 325 lakhs. Further, NSF requested SBH to grant it a term loan of Rs. 100 lakhs so that it could meet certain of its deferred dues. The question of sanctioning the term loan remained under consideration of SBH for a long time; so it agreed to provide an increased facility of cash credit up to Rs. 425 lakhs. Of this, an amount of Rs. 350 lakhs was to be under pledge of sugar stock with SBH in factory godowns at 10 per cent margin; the balance of Rs. 75 lakhs was to be under hypothecation of sugar stock not kept under similar pledge and of movable assets. The margin of 30 per cent and 45 per cent on these two items were to remain as before.

As the year ran out, NSF realised that the original expectation, of sugar bags being adequate to cover the outstandings in its cash credit account with SBH in the later months of the year, did not materialise. For instance, early in July 1962, only 4 lakh bags were under pledge with SBH; and on the assumption of average dispatches of 45,000 bags a month, the stock would have gone down to only 270,000 bags towards the end of September and before the commencement of the 1962-63 season. This would provide NSF with a borrowing power of Rs. 192 lakhs only, as against the outstanding commitment estimated to be

*Purchase of Demand Draft.

about Rs. 265 lakhs. In other words , NSF would be short of cash resources to the extent of Rs. 73 lakhs during July—September 1962.

The expenditure commitments, which included management agency commission and dividend, could be met if only NSF was in a position to avail of an additional amount of Rs. 75 lakhs within the overall cash credit limit of Rs. 350 lakhs. Since this ceiling had reference to pledge stock, of which NSF had limited quantities to offer, the only course open to NSF was to suggest an equitable mortgage of its fixed assets for a loan of Rs. 75 lakhs. This came to be known as "a clean cash credit". SBH agreed to this proposal against collateral security of equitable mortgage of fixed assets, namely, land, building, plant and machinery for six months upto the end of 1962. SBH agreed to extend a similar facility, though for reduced amounts, in subsequent years as well during the difficult period of July—September.

Meantime, SBH made a close study of NSF's finances *vis-a-vis* the frequent increases in its needs of working capital funds and came to two broad conclusions. Firstly, NSF was using a part of the working capital borrowings for capital purposes—for example, a sum of Rs. 20 lakhs during 1961-62 out of the cash credits. Secondly, NSF was paying high dividends, using up a major portion of its profits for this purpose (Appendix 5). SBH suggested that NSF should follow a conservative policy of financing expansions either through a re-investment of retained profits or through long term borrowings and additions to capital. Further, SBH observed that the margin of 10 per cent of cash credit on the pledged account was too low and ought to be raised to the normal pledge of 25 per cent within a reasonable time. It specifically suggested to NSF to lower, if not refrain from offering, dividends for the year 1961-62.

NSF, in fact, recognised the need for making an addition of Rs. 100 lakhs to its capital resources through a term loan, so that it could meet commitments such as the following : managing agency commission of Rs. 10.52 lakhs for 1959-60, cane cess of Rs. 21.20 lakhs for 1960-61, dividend payable to the Government of Andhra Pradesh of Rs. 20.42 lakhs for 1959-60, extra cane price of Rs. 12.50 lakhs in 1959-60, and capital expenditure of Rs. 37.11 lakhs as per the 1961-62 budget. Not all these items were in the nature of a capital budget: nor were these items meant

strictly for meeting the current requirements of expenditure in any single year such as 1961-62.

One of the conditions of SBH for its loans to NSF was that the Government of Andhra Pradesh should guarantee the loans. When NSF approached the government, it was informed that the government would reserve the right to levy a guarantee charge of ½ per cent. This would work out to Rs. 2.125 lakhs on the aggregate limit of Rs. 425 lakhs of cash credit.

While this by itself added to its finance costs in procuring working capital, NSF was confronted with another adverse circumstance at the beginning of 1963. Consequent on the enhancement of the Reserve Bank rate, SBH raised its rate on advances to 7 per cent, on the basis of 2½ per cent above the Reserve Bank rate. NSF's submission in favour of retaining the rate of 6½ per cent failed; and as per the terms of the promissory note executed by NSF stipulating a rate of 2½ per cent above the Reserve Bank rate, the rate chargeable to NSF automatically rose to 7 per cent.

Once again, in 1963, NSF began to experience a serious inadequacy of liquid resources. Its financial position began to assume precarious proportions and severe difficulty was anticipated in meeting the day-to-day expenses during the months of July—December. So NSF once again desired that SBH should extend the Rs. 75 lakhs clean cash credit arrangement. One of the reasons for the continued, if not aggravated, financial difficulty was that the cost of production was rising, without being accompanied by an enhancement in ceiling prices. This resulted in the margins of profit becoming smaller. Most of the cost increases emanated from factors beyond NSF's control; these included enhancements in cane prices, increases in the price of stores, higher wages due to Wage Board awards, higher costs of cane transport, and mounting interest charges on cash credits. Further, NSF was allotted a large export quota during the year—1.27 lakh bags of sugar, which resulted in a shortfall in the realisations, to the extent of Rs. 20 lakhs. It was feared that, by the end of July 1963, the drawing power of NSF, dependent on pledge stocks and hypothecation of movable assets, would be precariously low. Hence there was the immediate need for a clean credit advance of Rs. 75 lakhs, which it would be possible to repay by January next when adequate stocks were expected

to build up.

SBH sanctioned a clean cash credit of Rs. 65 lakhs which NSF repaid by the end of 1963. The need for repeating the request for special accommodation to the extent of Rs. 100 lakhs continued with NSF, particularly because of the low production of sugar, namely 471,378 bags as against the estimated quantity of 650,000 bags during the year. The sharp fall in production resulted mainly from the scarcity of cane, for the cane growers diverted their supplies to *khandasari* factories and *gur* manufacture. And the factors causing cost enhancements remained as in the previous year. SBH renewed the cash credit facility of Rs. 425 lakhs, inclusive of Rs. 75 lakhs on a clean basis, till July 1965.

While resolving to ask for a renewal of the facility for another year till July 1966, NSF made some efforts in contacting other banks as well. Of the seven banks approached by it, only two showed some interest, namely, the Bank of India Ltd. and the Punjab National Bank Ltd. In the latter case, the terms suggested by the bank manager at Hyderabad were as follows : 10 per cent margin on cash credit pledge account for an amount of Rs. 250 lakhs to Rs. 300 lakhs; and 25 per cent margin on hypothecation of stocks of sugar and stores up to Rs. 75 lakhs. It was possible, he suggested, for his bank not to insist on government guarantee on the pledge borrowings, though that would be necessary on the clean cash credit. The rate of interest would be 9 per cent on the clean cash credit and 8½ per cent on the pledge and hypothecation borrowings. Further, he insisted on the credit arrangement being on a fairly long term basis. With reference to NSF's request for a medium term loan of Rs. 100 lakhs, the Manager of the Punjab National Bank Ltd. explained that his bank would not be able to grant it immediately, since it had already exceeded the limit of advances on such loans under the restrictions placed by the Banking Companies' Act and the Reserve Bank of India.

The negotiations with Bank of India Ltd. made it clear to NSF that the terms and conditions would not be preferable to those offered by SBH. The margins would be 15 per cent on the pledge account and 45 per cent on hypothecation borrowings, and government guarantee would be insisted upon in respect of all cash credits. NSF, therefore, came to the conclusion that, while

some chance existed of the Punjab National Bank Ltd. sanctioning loans, if on a continuing basis over a period of years, there was little prospect of favourable terms of credit from the other banks contacted by it. So it resolved during June 1965 to request SBH for a cash credit of Rs. 425 lakhs, inclusive of Rs. 75 lakhs of clean credit up to July 1966. SBH, however, communicated the possibility of considering the request for a clean credit for Rs. 50 lakhs only, on the guarantee of the Government of Andhra Pradesh, for six months, if NSF agreed to scale down the payment of dividends for the year 1964-65. SBH thought that this should appeal to the Government of Andhra Pradesh as a reasonable proposition since the company was in severe financial position as regards the liquid resources and since the government happened to be the major shareholder. At the minimum, SBH contended, the amount payable as dividend could be retained in the company itself, pending an easing of its liquid position. SBH stated further that, if NSF repeated its request for a similar credit in the subsequent year, it might sanction within a ceiling of Rs. 25 lakhs only.

NSF's continuing request for a medium term loan of Rs. 100 lakhs from SBH met with a fairly firm refusal. The scheme of medium term loans operated by SBH was restricted to the financing of new projects, schemes of expansion, and reimbursement of expenditures incurred by the borrower on such purposes in the previous years. Since the demand by NSF came under none of these descriptions, the prospect of securing a term loan from SBH was negligible.

NSF calculated that, even if a clean credit of Rs. 50 lakhs from SBH was assumed, the liquid position would be precariously in the red by an amount of Rs. 77 lakhs by the end of September 1965. Two proposals for meeting the situation could be considered, so as to keep its expenditure commitments within the drawing power available to it; *viz*, (*a*) to postpone capital expenditures on tractors, etc. to the extent of Rs. 7 lakhs, till early 1966; and (*b*) to defer the payments to the Director of Agriculture, Andhra Pradesh, for manures for plantation, to the extent of Rs. 15 lakhs. If the policy of the Government of India on sugar releases was liberalised so as to bring down the stock of sugar of NSF to the level of 50,000 bags, it might be possible to reduce the cash credit requirements by about

Rs. 8 lakhs.

The management of NSF prepared a statement of expected expenditures and revenue for the years 1964—70 and found that the estimates showed a gap of Rs. 41 lakhs between the available cash credits and the drawing power in 1965-66, and that the major ways of filling it were by obtaining clean cash credit to the extent of Rs. 25 lakhs and by deferring dividend payments to the Government. For the following years, 1966-67 and later, NSF would be able to manage without clean cash credit facility and it was possible for it to reduce its drawing on the cash credit account as well, because of the likely improvements in its working and liquid position.

The main reason why SBH was willing to consider sympathetically the grant of a clean cash credit of Rs. 25 lakhs only was that NSF was already committed to the payment of advances to cane growers and that it would be placed in a very embarrassing position if it were suddenly rendered unable to meet these commitments. NSF, in its turn, took steps to commit itself to making advances to the farmers at reduced rates for the 1966-67 season.

The figures of advances to *Adsali* (crop over a year) and *Eksali* (one year crop) were Rs. 440 and Rs. 320 per acre in 1964-65; Rs. 360 and Rs. 280 in 1965-66; and these were proposed at lower levels during 1966-67, namely, Rs. 240 and Rs. 200. This, however, led to a discussion in the Legislative Assembly and the government pointed out to NSF that advances to the extent of Rs. 1,200 per acre were being made in Maharashtra. It was suggested that larger advances than those proposed by NSF would be justified since they would allow the ryots to go in for better manures and raise a crop that would enable them to repay the advances promptly. The management of NSF, however, felt that its own financial position would not allow higher advances than were proposed. Further, NSF was likely to face the consequences on crushing of drought conditions in that year, enhancement in the rate of interest charged by SBH to 8½ per cent and increased margin on pledge advances from 10 per cent to 15 per cent. (Figures of dues from the cane-growers are shown in Table 6).

In fact, SBH suggested enhancements in the margins to 20 per cent on sugar pledged and 40 per cent on hypothecation of stores and spares from January 1967 onwards;

and this would be raised further to 25 per cent and 50 per cent respectively from January 1968. While SBH agreed to retain the rate of interest at 8½ per cent as a special case, the rate on the clean credit advance would be 9½ per cent with quarterly rests. While SBH attached great value to its criticism of the high dividend payments by NSF resulting in a depletion of its cash resources, it agreed to overlook the point in view of NSF's consent to enhanced margins on sugar and stores and to the repayment of the clean cash credit by the end of 1965. If the working results of NSF for 1965-66 were unsatisfactory, SBH insisted, however, that it would like to be consulted in regard to the payment of dividends for the year. SBH held out the warning that, if the same dividend rates as before were maintained, it would not be possible for it either to consider the grant of a clean credit or the continuance of the concessional margins.

TABLE 6
Dues from Cane Growers to NSF
(in Rs. lakhs)

	Amount
1961-62	60.98
1962-63	87.11
1963-64	129.80[1]
1964-65	97.99[2]
1965-66	40.89[3]
1966-67	65.57

[1]This amount includes Rs. 30.73 lakhs for the supply of chemical fertilizers on government account.

[2]This amount includes Rs. 37.59 lakhs for the supply of chemical fertilizers on government account.

[3]This amount includes Rs. 21.25 lakhs for the supply of chemical fertilizers on government account.

Source : Annual Reports of the Company.

NSF desired SBH to reduce the rate of interest by ½ per cent, because of the government guarantee of the credit facility. And NSF did not appreciate the constraints on dividends that SBH suggested. To this attitude of NSF, the response of SBH was unfavourable, and SBH regretted their inability to consider any clean cash credit facility to NSF.

The problem of inadequate liquid resources was faced once again by NSF by the middle of 1966. There had been two

successive poor seasons already and drought conditions affected the quality as well as the output of the cane resulting in low recovery. The season during 1966 was not expected to commence before the end of November and even then the total crushing might not exceed 3 lakh tonnes of cane. Hence the need for a clean cash credit of at least Rs. 50 lakhs arose acutely again during October 1966—March 1967. Ordinarily such accommodation was supported by a collateral mortgage of lands, building and plant. NSF found itself unable to provide the same collateral security this time since it was hoping to get a term loan of Rs. 75 lakhs from the Life Insurance Corporation of India, to which these assets had to be mortgaged. So NSF persuaded the Government of Andhra Pradesh to spare government securities for this purpose, so that these might be deposited with SBH as collateral security for its clean cash credit to NSF. SBH agreed to this arrangement and the amount of cash credit finally agreed upon was Rs. 45 lakhs for a period of three months, within the overall limit of cash credit pledge already sanctioned by SBH. Government securities of the face value of Rs. 50.56 lakhs were offered as security to SBH under these arrangements.

Though SBH sanctioned the loan of Rs. 45 lakhs in April 1967, for a period up to August 25, 1967 at an interest of 10 per cent, it took NSF some time to lodge the securities with SBH and complete the formalities relating to the documents. So the loan could not be drawn quickly and it became necessary to extend the cash credit facility till the end of January 1968. NSF hoped to be able to repay it during January 1968 when adequate stocks of sugar would sufficiently improve its liquidity.

It became clear to NSF that its negotiations for a clean cash credit from SBH were gradually becoming unfavourable in amount, period of loan and terms and that SBH was constantly harping on a criticism of its policy of dividend declaration—a managerial prerogative in NSF's view. Further, NSF had already deferred certain payments, mainly to the government, on account of its unfavourable liquidity position. Moreover, the need to improve the productivity of the farms owned by NSF became urgent, involving an immediate investment in making adequate water available and in supplying the necessary fertilizers. Under these conditions, NSF began to consider

other sources of funds, either short term or medium term in nature, instead of being tied to, or limited by, SBH's response.

Table 7 shows the limits of cash credit by pledge and hypothecation and the clean credit, within the overall pledge limits, that SBH sanctioned to NSF during 1960-68.

Meanwhile, NSF was forced to contemplate modernisation of its farms and this meant considerable capital expenditure.

TABLE 7

Limits of Cash Credit from State Bank of Hyderabad to NSF (1960-68)

(in Rs. lakhs)

	Pledge of sugar	Hypothecation of spares	Clean cash credits
1960-61	350	175	—
1961-62	350	75	—
1962-63	350	75	65
1963-64	350	75	65
1964-65	350	75	—
1965-66	225	75	45
1966-67	85	50	—
1967-68	125	75	—

Source : Annual Reports of the Company.

For some time in the past, monsoons had been failing and irrigation was becoming increasingly difficult under the traditional methods, with a decline in the storage capacity of the Nizamsagar. Scarcity of water was experienced particularly in summer when the need for water for the crop was at the maximum. It was therefore necessary to deal with the problem of irrigation, firstly, by economising the use of water by preventing wastage and by maximising the efficiency of utilisation of whatever water was available, and secondly, by storing water locally for stand-by use during times of scarcity of water in the canal. The sprinkler irrigation system, which had become popular in India as well as abroad, could be introduced in NSF's farms. In fact, it would be legitimate for NSF to request the government to subsidise this modern method of irrigation in view of its direct good results on agricultural productivity. The capital cost of the equipment would work out at Rs. 850 per acre, on such items as motors, laterals, nozzles, pipes and reservoir storage tank. NSF proposed to launch the new system of irrigation over an area of 600 acres, involving a capital expenditure of Rs. 5.1 lakhs.

The cost of three storage tanks, including the necessary pipelines, to serve an area of 450 acres, would be Rs. 3.63 lakhs. By introducing the syphon system of taking water from field channels to furrows, instead of cutting the bunds with spades, NSF would save time as well as provide accurate quantities of water to the crop. This system would cost Rs. 12,500 for 500 acres.

The soil of NSF farms was such that the plants could not fully absorb the top dressed fertiliser. So foliar feeding method could be adopted, efficiently, in the liquid form. At the rate of two applications of foliar, 4,000 acres of the cropped area could be modernised at a cost of Rs. 56,000.

The total outlay on all these items would be Rs. 9.415 lakhs or Rs. 897 per acre. Assuming that this expenditure could be written off in five years, the annual debit per acre would work out at Rs. 180 and would be equal to the value of extra production of about 4 tonnes per acre. Experience showed that, due to difficulties of irrigation, there had been an approximate decline of 7 tonnes of cane output per acre over the recent years. Hence, NSF felt that the modernisation scheme would be an economical proposition. It was possible to raise the output through modernisation even higher than the minimal assumption of 4 tonnes per acre; in that case, the capital expenditure would pay itself off in less than five years in fact. Likewise, foliar feeding would have its own advantages and would more than repay the costs in a short time.

This modernisation programme got closely linked with the working capital problems of NSF; for, once effective, it would reduce the working capital requirements to some extent or raise the revenue-earning prospects; and the pay-back period was a relatively short one.

NSF gradually realised that there was scope for effecting improvements in productivity and over-all efficiency, and one of the angles of approach lay in the introduction of cost-economising measures. During 1966-67, it tried to effect economy in expenditure wherever possible. A voluntary retirement scheme was introduced under which more than 1,500 workers were allowed to retire; and this resulted in a cost reduction of Rs. 30 lakhs by way of wages. Several measures of economy were effected in the purchase of stores, and the sale of scrap and surplus stores. While a total cost reduction of about Rs. 72.75 lakhs was planned,

about Rs. 60 lakhs of reduction was realised in the year 1966-67 itself, the balance being expected to materialise in the working results of the plantation department during 1967-68. The annual report of NSF for 1966-67 speaks of a recurring saving of Rs. 50 lakhs a year consequent on these economy measures and the Chairman of NSF paid a deserving tribute to the dynamic ability of the managing director who steered through the economies with foresight and courage. It was due to these efforts that the original forecast of a loss of Rs. 100 lakhs for 1966-67 was reduced to Rs. 48 lakhs. The dividend to the shareholders was passed over for the year 1966-67. Details of the cost economies effected in 1966-67 and the consequent reduction in losses during 1966-67 are shown in Table 8.

TABLE 8

A. Cost Economies

(Rupees in lakhs)

	Factory	Plantation		Carbon-dioxide	Total Rs.
	Sugar	66-67 crop	67-68 crop		
Salaries and wages, bonus and other benefits—including Head office	30.32	7.35	8.80	—	46.47
Stores consumption control	3.08	—	—	0.15	3.23
Manure—Phosphate and Potash	—	4.30	4.00	—	8.30
Cash flow through several other sources as real income (e.g. transport, revenue sub-contracts, sale of scrap, food crops, work-shop revenue, etc.)	9.43	4.15	To be fore-cast later	—	13.58
Improved processing to produce more E-30 and D-30 grade sugar	1.17	—	—	—	1.17
Total Rs.	44.00	15.80	12.80	0.15	72.75

B. Reduced losses of NSF—1966-67

	Original estimate of profit or loss	Cost economies	Final estimates of profit or loss
1. Sugar production	—66.00	44.00	—22.00
2. Plantation	—44.05	15.80	—28.25
3. CO_2 Plant	+ 0.10	0.15	+ 0.25

The cost economies achieved by NSF had permanently favourable effect on its working capital requirements; for, without affecting outputs or revenues, these kept the costs low.

Early in 1967, NSF found its ways and means position very acute on account of the low crushing in the previous season, the low recovery of sugar from the cane and the low yield of cane from its farm. The cash credit facilities available from SBH would enable NSF to get Rs. 45 lakhs of clean cash credit on the strength of the approved securities of Rs. 32 lakhs and on the hypothecation of spares. NSF estimated that, by the end of September 1967, the gap between the needs and funds would be of the order of Rs. 83 lakhs and that this would mount up to Rs. 105 lakhs by the end of December that year. In spite of certain economies made in the expenditures over the previous six months described earlier, and the deferment of payments due to the government, this would be a precarious liquid position for the company. A detailed cash statement was prepared (Table 9) and it was feared that the cash position would

TABLE 9

Cash Inflow, Cash Outflow, Outstandings in Cash Credit Account and Drawing Power Available (1967)

(in Rs. lakhs)

At the end of	Cash inflow	Cash outflow	Amount outstanding in C.C. Account	Drawing power available	Difference between Columns (4) and (5)
February	44.69	57.76	113.58	136.00	+ 22.42
March	44.69	52.83	121.72	133.29	+ 11.57
April	44.19	48.92	126.45	108.09	— 18.36
May	44.19	41.97	124.23	82.89	— 41.34
June	43.69	33.64	114.18	57.69	— 56.49
July	43.69	30.64	101.13	32.62	— 68.51
August	1.74	19.76	119.15	32.00	— 87.15
September	0.90	21.54	139.79	32.00	—107.79
October	0.10	25.46	165.15	32.00	—133.15
November	0.10	20.96	186.01	32.00	—154.01
December	43.19	49.56	192.38	48.80	—143.58

become critical from the end of March 1967 itself. In order to meet the situation of an uncovered cash gap of about Rs. 108 lakhs towards the end of September 1967, NSF thought of several courses of action. One was to defer the payment of taxes to the

government under the heads of purchase tax on cane and land taxes; another was that the dividends payable to the government for 1965-66 should be deposited back with the bank. Thirdly, cooperative credit institutions should be persuaded to make advances available to the cane growers. Certain expenditures on spares and freights might be cut down or postponed. These would together reduce the immediate needs of cash outflow by Rs. 66.42 lakhs. There would still be a cash gap of about Rs. 42.22 lakhs. In order to deal with this situation, NSF desired to devise a scheme of public deposits to the extent of Rs. 50 lakhs.

The Board of Directors approved the scheme towards the end of March 1967 and decided on interest rates of 10 per cent, 11 per cent and 12 per cent per annum on deposits respectively for 12 months, 18 months and 24 months to 5 years, the interest being payable once in six months. The last category, carrying the highest rate of interest, could approximate, to no small extent, to a term loan as against an annual credit; and NSF could safely launch some modernisation programmes.

The proposal was sent to the Government of Andhra Pradesh for its approval and it was submitted that this scheme of public deposits on the part of NSF would not, in any way, conflict with the government's own plans of loan floatation. Simultaneously, NSF requested the Reserve Bank of India for permission for calling public deposits. There were some complications regarding the quantum of public deposits that NSF could attract, for the rules governing public deposits limited the ceiling to 25 per cent of the paid-up capital plus reserves, and all unsecured loans of the company would also be treated as part of the deposit. NSF was worried about two items, namely, the loan that it was fondly hoping to get from Tirumalai Tirupati Devasthanam (TTD) for Rs. 25 lakhs and the dividends due to the government but likely to be deposited with the company itself for some time. NSF explained to the Reserve Bank of India that it was a government company, that the Government of Andhra Pradesh had a controlling interest in it, that the loans taken by it under government guarantee should be dealt with in the same manner as loans guaranteed by managing agents or secretaries and treasurers. Since the latter are not treated as deposits, NSF argued that the likely loan from TTD should also be excluded from being considered as a deposit. NSF contended that guarantee

by the Government of Andhra Pradesh to this loan did not differ in principle from a guarantee by managing agents in the case of a private sector company and the loan therefore deserved exemption from the deposit clause. The Reserve Bank considered the representations of NSF and agreed to exclude from the scope of the term deposit the amount of Rs. 11 lakhs due to the Government of Andhra Pradesh but deposited by it with the company as a loan; but as regards the loan expected from TTD, the Reserve Bank refused a similar exemption. The amount of public deposits which NSF could invite, therefore, was sealed at Rs. 50 lakhs, and the final shape of the scheme consisted of deposits for 12 months, subject to a minimum of Rs. 5,000, at 10 per cent interest. The original idea of three-tier interest rates was dropped since the Government of Andhra Pradesh approved only of a blanket 10 per cent, twelve months scheme. Probably the government feared that the three-tier scheme might be so attractive to investors as to have some adverse effect on its own loan subscriptions. Being a public enterprise, obliged to secure the government's permission to its deposits scheme, NSF had to adhere to the terms of the government approval and work on funds that might not stay with it beyond 12 months. Incidentally no government guarantee was involved under the scheme of public deposits.

Looking around for prospective institutional investors in public deposits, NSF easily thought of TTD as an important body from which a sizeable financial accommodation could be expected. TTD is in charge of the temples of Tirupati, which attract a large number of devotees from all over the country, who worship the deity, offering moneys in token of their devotion. TTD was known to have helped other institutions in the State of Andhra Pradesh with loans. NSF, therefore, desired TTD to invest Rs. 25 lakhs in the shape of a public deposit under its new scheme. If only this was successfully negotiated, NSF would have gained a variety of advantages : (*a*) a large, in fact half of the expected amount of deposits would come all at once, relieving uncertainty for NSF; (*b*) the administrative costs of handling a single Rs. 25 lakh-deposit would be smaller than those on a few hundred small and independent deposits; and (*c*) there would be near-certainty of its renewal—perhaps for a few years, giving NSF the virtual benefit of a term loan.

However, it was found that the Hindu Religious and Charitable Endowments Act would not permit TTD to make a fixed deposit in companies other than banking institutions, unless the necessary exemption was granted by the State Government. A natural alternative suggested itself; and NSF decided to negotiate a loan from TTD. Initial contacts with the Endowments Commissioner of the State Government indicated that it was possible under the existing rules governing TTD for it to make a loan to Andhra Pradesh State undertakings of public utility, under guarantee from the State Government on such terms and conditions as TTD might stipulate, with the previous sanction of the State Government. In fact, TTD had already made a loan of Rs. 65 lakhs to the Andhra Pradesh State Road Transport Corporation.

The Managing Director of NSF contacted TTD for a loan of Rs. 50 lakhs; but TTD indicated its willingness to consider the grant of a loan of Rs. 25 lakhs only, to be disbursed in two instalments. The rate of interest would be 10 per cent, which approximated to the interest offered by NSF under the fixed deposit scheme, and the loan would be tenable for one year, to be renewed by TTD at its discretion. And guarantee by the Government of Andhra Pradesh would be necessary.

NSF was happy at TTD's readiness to give the loan but argued that the nature of the transaction had now changed from that of a fixed deposit to that of a secured loan. Since NSF might have to pay a guarantee commission to the government, it pleaded with TTD for a lower percentage of interest on the loan.

TTD finally communicated its acceptance of an interest rate of 9½ per cent as in the case of its loan to Andhra Pradesh State Road Transport Corporation. Immediately, therefore, towards the end of June 1967, NSF wrote to the Government of Andhra Pradesh requesting for its guarantee of the loan and the interest. In the course of discussions with the Finance Department, NSF came to realise that the question of Government guarantee in this case was somewhat complicated. The Reserve Bank of India was taking strong exception to the government offering guarantee for loans which carried high interest rates. The ground on which the objection rested was that high interest rates would interfere with the programmes of borrowing by the government itself. So the Reserve Bank advised the State Government against

guaranteeing loans whose interest rate exceeded 7-7½ per cent. It appeared to NSF that it could not expect the government guarantee if the rate of interest exceeded 7½ per cent. NSF, therefore, suggested to TTD that this figure might be determined as the rate of interest, but that NSF would take steps to compensate TTD in an indirect way through a donation equivalent to 2 per cent of the loan; whatever the formal terms of the transaction, the real income to TTD from the loan would remain unaltered at 9½ per cent.

Realising the complications surrounding the loan negotiation, NSF simultaneously tried to make another effort at reviving the original possibility of TTD making a fixed deposit of Rs. 25 lakhs with NSF. As section 108 of the Andhra Pradesh Charitable and Hindu Religious Institution and Endowment Act disapproved of such deposits by TTD with non-banking institutions, NSF requested the government to give exemption to TTD from this section as a special case, so that the amount could be made available to NSF at 10 per cent under its scheme of public deposit. The Government of Andhra Pradesh took the view that such an exemption would create a difficult precedent and pressures from several quarters and concerns might be brought on the government in course of time for obtaining similar exemption. At the same time, the government communicated its firm decision against guaranteeing loans which carried interest at 9½ per cent. So NSF had no alternative but to persist in the proposal to pay an interest of 7½ per cent and a donation of Rs. 25,000. TTD communicated its acceptance of these proposals towards the end of September 1967.

Now that the terms had been settled to the mutual satisfaction of NSF and TTD, NSF approached the Government of Andhra Pradesh for a guarantee of the loan and the interest at 7½ per cent stating that, in addition to the interest, NSF agreed to pay an amount of Rs. 25,000 to TTD as a donation in order to meet the difference, as far as possible, between the 10 per cent rate paid by NSF on public deposits and the 7½ per cent rate for which the government would stand guarantee.

At this stage, the Government of Andhra Pradesh informed TTD that there was a general disapproval by the Reserve Bank of India of the State Government guaranteeing loans carrying such a high rate of interest as 7½ per cent, for severe disparities

between the rates of interest at which the government floated the loans and the rates guaranteed by the government would not be desirable. So the government would not be able to guarantee the present loan by TTD to NSF at the rate of interest of $7\frac{1}{2}$ per cent. Nevertheless, the government did not mind NSF offering that rate of interest or any higher rate up to 10 per cent without insisting on a guarantee from the government. The government further tried to impress on TTD the credit-worthiness of NSF which was a government company, in which the major share-holding rested with the Government of Andhra Pradesh and the majority of the board of directors were composed of government officers and nominees. Since there should ordinarily be no doubt about the goodness of the loan to the NSF under these conditions, the government argued, TTD could consider granting the loan without asking for government guarantee.

NSF then requested TTD to accept the contention and offer the loan without government guarantee. Since the original alternative of TTD making a deposit was almost impossible because of the government's unwillingness to grant TTD the necessary exemption in this direction, NSF appealed to TTD to scale down the rate of interest on the loan to 7 per cent, since the Government of Andhra Pradesh might guarantee a loan at that rate, though not at $7\frac{1}{2}$ per cent. NSF, however, would consider the offer of an additional donation approximating to $\frac{1}{2}$ per cent so that TTD would eventually realise an income of $9\frac{1}{2}$ per cent on the loan.

As the matter was receiving consideration at the hands of TTD, NSF was made to understand that it might not be easy for it to secure government guarantee for the loan even at 7 per cent interest, for though the rate of interest by itself was not too high to prevent the government from giving the guarantee, it was accompanied by further payments by NSF in the form of a donation. It, therefore, seemed impossible for NSF to conduct any further version of negotiation designed to secure the amount of Rs. 25 lakhs which it fondly hoped to be able to derive from a single and reliable source, with good prospects of periodical renewal. Towards the end of 1967, NSF communicated to TTD the improbability of the transaction taking place, because the terms of the interest rate accompanied by donation had to be

communicated to the Reserve Bank before the government could guarantee the loan and the interest, and it was almost certain that the Reserve Bank would disapprove of the transaction. The whole episode of negotiations and hopes which ran over nearly a year thus ended in futility, and the funds for which there was dire need could not reach NSF on account of formal difficulties, external to both NSF and TTD. The urgency of the transaction was clear to the government and the credit-worthiness of NSF was equally clear to TTD; yet neither a loan nor a deposit materialised.

While the liquid position of NSF was causing it anxiety every year, particularly in certain months, the needs of capital expenditure for modernisation of the farms as well as the mill turned out to be urgent, considering the good effects of such programmes on the efficiency of the plant and the cost of manufacture. So NSF began to consider alternative methods of raising term capital. One proposal was to issue "right shares" against cash to the extent of Rs. 53.6 lakhs which was standing as "unclassified capital"—in other words, to issue capital equal to the difference between the authorised capital and the issued capital. Perhaps the issue could have been at a premium.

This would have provided NSF with funds on equity basis, without involving it in interest-carrying borrowings. This idea was not actively pursued. Perhaps the Government of Andhra Pradesh, the major shareholder may have been unwilling either to subscribe to additional issues at that time or let private parties do so.

Another possibility was to approach the Unit Trust of India (UTI) in the context of floating redeemable debentures. UTI's response was not encouraging, for while it called for a lot of financial information and explanations on the fall in NSF's profitability over the recent years, it would be able, in any case, to assist NSF only for a small part of the total debenture issue. UTI advised NSF simultaneously to approach other institutions also for under-writing the debentures.

By this time it was clear that there was no chance of securing a term loan from TTD and NSF was obliged to concentrate on other and more certain sources. It, therefore, commenced negotiations with Life Insurance Corporation of India (LIC), as per the decision of the Board of Directors during September

1965 for a term loan of Rs. 75 lakhs. In the first few months after the initial approach by NSF, LIC's reaction consisted only of calling for details regarding the rationale of the loan, the anticipated financial position of NSF, and its cash flow statements for the following five years. NSF offered a convincing explanation of its needs of capital expenditure, which, briefly, was as follows. The milling tanden and its first plant being old, the extraction fell below 90 per cent as against the normal figure of 92-93 per cent. NSF proposed to introduce a new process called the 'diffusion process' which would raise the prospect of extraction to about 96 per cent. The cost of installation of the necessary machinery was about Rs. 25 lakhs. The experimental experience of NSF with this process encouraged it to go in for the modernisation and NSF did not foresee difficulties in acquiring the plant. When the new process was introduced, it would be necessary to effect certain incidental changes in the manufacturing house so as to handle the increased juice with efficiency. The capital cost of the equipment so required would be about Rs. 15 lakhs. Further, centrifugals of high capacity, capable of being driven by electricity, should replace the old and water-driven system, so that the factory would be able to cope with the increasing quantum of crushing. This would cost about Rs. 20 lakhs. The tractors which had become old and outmoded needed replacement, entailing a cost of Rs. 10 lakhs. Finally, additional sheds in the central workshop had to be constructed and some additional housing accommodation for factory employees was necessary; both these items would involve an expenditure of Rs. 5 lakhs.

Naturally the question was raised by LIC as to whether this amount of Rs. 75 lakhs could not be raised from the internal resources of NSF. By itself, the amount might not be considered beyond NSF's capacity of internal financing. The earlier expansions, particularly of 1,000 tonnes crushing capacity were fully met from its own internal resources. In fact, the cash payment actually made by the shareholders towards the subscribed capital standing in the books at the value of Rs. 145 lakhs was only Rs. 98 lakhs; the difference of Rs. 47 lakhs was accounted for by bonus shares, which were a reflection of reserves having been retained in the business over the past years. It was through such measures of plough-back of surpluses that the

confectionery plant and the carbon-di-oxide plant were set up by NSF. The position of NSF at this time, was, however, uncongenial for self-financing of fresh capital expenditures.

Part of the current financial difficulties of NSF arose from external conditions. For example, the credit policy followed by SBH, which has been NSF's main source of working capital for many years, became so restrictive at that time that, as against the amount of Rs. 425 lakhs that was formerly made available to NSF every year, the ceiling of the accommodation would be Rs. 300 lakhs this year. Further, SBH began to raise the margins for loans under pledge of stock and hypothecation, as a result of which borrowings were further restricted. Moreover, SBH refused to offer a clean cash credit, which had been available to NSF for several years before.

To add to these difficulties, NSF began to suffer from severe accumulation of sugar stocks. Because of governmental control on the distribution of sugar, NSF, along wiih other sugar factories, could sell stock only under release orders from the government. Even when release orders were issued by the government, the wholesalers, in whose favour the orders stood, were taking their own time in lifting the allotted stocks, partly because of a glut in the market. NSF, therefore, was denied the opportunity of disposing of its stocks of sugar, even if at relatively low prices, in order to step out of the acute dearth of liquid resources.

It was on account of the credit restrictions and the sales difficulties that NSF was obliged to utilise whatever internal resources by way of surpluses it had for working capital purposes. No wonder, then, that it had to look to outside sources such as LIC, for a term loan. NSF desired that the term loan should extend over a period of ten years.

Early in August 1966, LIC informed NSF of its consent in principle, to grant it a term loan of Rs. 75 lakhs under the following conditions :

(1) The loan would be on the basis of a first fixed and specific mortgage charge on all the present and future fixed assets of the company and of a floating charge on all its other assets, except those under hypothecation with NSF's bankers for cash credit and over-draft purposes. The net value of fixed assets available as securities was represented as Rs. 186.33 lakhs

at the end of September 1965.

(2) The loan would be within 50 per cent of the security proposed.

(3) The rate of interest would be 9 per cent per annum, payable half yearly, subject to a rebate of 1 per cent on prompt payment of the instalments of the principal and the interest on the due dates. In case of default in payment of interest on the due dates, compound interest would become payable.

(4) The loan should be repaid in 10 years after its disbursement.

(5) NSF should pay a commitment charge of 1 per cent per annum payable at half yearly interval on the undrawn amounts of the loan from the date of acceptance by NSF of LIC's offer of the loan.

(6) NSF should create a sinking fund for the repayment of the loan and invest it in securities approved by LIC.

(7) The mortgaged property should be insured in the joint names of NSF and LIC and an appropriate share of the insurance should be placed with the LIC itself.

(8) All costs, charges and expenses incurred by LIC in processing the transaction should be borne by NSF.

LIC informed NSF that the offer of the loan would be open for a month from August 6, 1966 onwards.

On receiving these conditions, NSF suggested to LIC to be content with the mortgage by NSF of fixed assets worth Rs. 150 lakhs net, as that would satisfy the condition of 50 per cent margin for the loan proposed by LIC. Specifically, NSF requested that the agricultural lands valued at Rs. 26 lakhs should be excluded. It contended further, that the assets which would soon be acquired from the loan of Rs. 75 lakhs, would be an addition to the net block which LIC as mortgagor could look to; besides, there would accumulate a sinking fund at the rate of Rs. 7.5 lakhs every year, to be invested as per LIC's approval. The reason for NSF's request to limit the mortgageable value of the assets to Rs. 150 lakhs was that this would enable it to raise fresh capital from other sources, if and when required, on the strength of unmortgaged block of assets. In the alternative, it asked whether LIC would be willing to meet further capital requirements of NSF from time to time.

To this query, LIC replied that it would be premature, at

that stage, to commit itself regarding the provision of additional loans to NSF in future; and LIC agreed to limit the mortgage security to the net book value of fixed assets excluding agricultural lands which during the period of loan, should be maintained at double the amount of the loan.

The Controller of Capital Issues conveyed the consent of the Central Government under the Capital Issues (Control) Act of 1947 to LIC's loan to NSF, subject to the condition that the amount would not be expended on purposes other than those described in the application by NSF and that the permission would lapse within 12 months from the date of issue. Early in February 1967, NSF communicated to LIC the decision of its Board of Directors in favour of seeking a loan for Rs. 75 lakhs from LIC as per the terms outlined above.

Two months later, having felt the immediate need of funds for placing an order for the electricallly driven centrifugal machines, NSF sought from LIC a release of a portion of the loan at once; for it had to pay 25 per cent of the value of the machine as an advance, and the order had to be placed at once because the delivery would take up to 10 months. LIC, however, was not agreeable to release any part of the loan before the mortgage deed was signed and all legal formalities were completed.

On the submission of NSF's title deeds to the mortgageable property, the legal examination relating to the transaction commenced at LIC's end. Meantime, LIC demanded, in June 1967, the payment of commitment charges amounting to Rs. 24,363.25 at 1 per cent on Rs. 75 lakhs for the period March 2, 1967 to June 30, 1967. NSF contended that, though it had requested LIC to make the loan available as far back as February 27, 1967, even the verification of the title deeds by LIC's solicitor had not yet been completed; so, NSF argued, it was not responsible for the delay and would appreciate if the commitment charge was waived until the loan was made availble to it by LIC. LIC, however, explained that, by definition, the commitment charge derives from the fact that the lender commits his funds for the purposes of the borrower on a certain date and, from that date, the borrower has to bear the charge for the commitment of funds. It was true that time was being taken in the verification of the title deeds, though part of the reason for the delay occurred because the solicitors of LIC wanted to make the least expensive

arrangements for NSF by way of local legal assistance.

NSF was alarmed by the high amount of commitment charges which were mounting up at the rate of Rs. 208 a day; and a lot of delay was occurring before the actual sanction of the loan. NSF even wondered what would happen if eventually at the end of the examination of the title deeds, LIC did not sanction the loan. LIC answered that such a contingency was only hypothetical; but if it did occur, the borrower would have to pay the commitment charges. NSF could do little more than ask LIC to expedite the examination of the title deeds and complete the legal formalities preceding the grant of loan. Meantime, the next instalment of commitment charges for the half year ending with December 31, 1967 became due for an amount of Rs. 37,500; and the Board of Directors of NSF approved the payment.

Towards the end of December 1967, a draft mortgage deed was received by NSF, though it could be signed and rendered valid only after some still pending examination of property titles was completed. On a careful scrutiny of the mortgage deed, the Managing Director of NSF tentatively informed LIC that the terms were so rigid that, if they were strictly interpreted and implemented, NSF would completely forfeit its managerial freedom. Under the mortgage deed, the management could not remove even a nut or bolt from the factory and replace it without the prior permission of LIC. He doubted whether it would be acceptable to the Board of Directors. Within a few days the Board of Directors of NSF considered the draft mortgage deed, some of the conditions of which are listed below :

(1) NSF had to assign to LIC all plants fixed and unfixed, including motor trucks and vehicles, as well as things attached or fixed to lands and buildings lying loose thereon. (Actually the motor trucks, vehicles and tractors were at that time under hypothecation with SBH).

(2) The cost of reconveyance of the property to NSF after repayment of the loan would amount to Rs. 2.25 lakhs.

(3) Future acquisitions of assets should be completely unencumbered and transferred by conveyance to LIC.

(4) Without LIC's prior and written consent, NSF should not remove the plant and machinery or any part of it from wherever they were installed.

(5) LIC would have freedom to examine NSF's books and accounts and all costs incurred by LIC in such inspections should be borne by NSF.

(6) During the agreement, NSF shall not, without LIC's prior and written consent, undertake any project or expansion other than that for which the loan is taken.

(7) LIC would have the power to direct alterations in the Articles of Association, if necessary; and NSF should periodically inform LIC of any happening likely to affect its profit or business prospects.

NSF finally informed LIC towards the end of January 1968 that the terms of the mortagage deed were not acceptable and that the loan negotiations could be treated as closed.

LIC's reaction was that the terms were similar to those contained in all its mortgage deeds and that, for technical reasons, they were bound to sound rigid and strict, though in practice most of the severities involved in them would hardly have to be brought into action.

NSF had to pay an amount of Rs. 5958.90 towards commitment charges up to January 29, 1968. The total commitment charges incurred by NSF were Rs. 67,822.15. Over and above this, an espenditure of about Rs. 20,000 was incurred by LIC in connection with the legal formalities of the loan, which had to be reimbursed by NSF.

By the end of March 1968, NSF had with it a stock of 1,83,000 bags of sugar under pledge and 8,045 bags out of pledge. 60 per cent of the total number of bags constituted the levy quota at Rs. 132 and the balance of 40 per cent was meant for free sale in the market. The margins which the bank would allow on these two sections of stock were 10 per cent and 30 per cent respectively, and the valuation of the stocks would be at the rates of Rs. 132 and Rs. 321 per bag respectively. NSF, therefore, had a drawing power of Rs. 346 lakhs at that time, as against the outstanding cash credits amounting to Rs. 116 lakhs. In addition, some credit would be available on the basis of hypothecation of stores and materials at 30 per cent margin. Thus, NSF could claim to be in possession of a clean excess of Rs. 200 lakhs of potential liquid resources over commitments. Further, the following season was expected to be a good one, in which 4 to 4.5 lakh tonnes of cane might be crushed.

As indicated earlier, the terms of SBH were becoming stiffer; so NSF looked for an alternative source of funds and found one in the Syndicate Bank Limited. The interest rate charged by this bank was $8\frac{1}{2}$ per cent, without the condition of government guarantee, as against the rate of 9 per cent plus government guarantee costing $\frac{1}{2}$ per cent in the case of cash credits from SBH. Further, the Syndicate Bank Ltd. was prepared to offer a clean credit of Rs. 45 lakhs, to be used by NSF as it wished, whereas SBH used to link it with the refinancing of agriculturists. The limit of cash credit that the Syndicate Bank Ltd. offered was Rs. 200 lakhs, besides the clean credit of Rs. 45 lakhs. NSF's credit transactions with Syndicate Bank Ltd. commenced on April 1, 1968.

It is of interest to add that, immediately after the Reserve Bank of India reduced the rate of interest by 1 per cent, NSF decided on stopping further deposits under its scheme of public deposits at 10 per cent; and it reformulated the scheme for the following year at an interest rate of 9 per cent. These decisions were taken at a time when the crushing season had just closed and the financial position of NSF was so good that even the modernisation programmes were undertaken, in limited measure and on priority basis, out of its current surpluses—in terms of cash as well as of excess of income over expenditure. The total cost of the modernisation programme was estimated at Rs. 76 lakhs; of this, by the end of March 1968, NSF had started on programmes worth Rs. 20 lakhs.

APPENDIX 1

Balance Sheet (Condensed) as on 30th September (NSF)

Rupees in lakhs

Liabilities	1960-61*	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Share capital	146.06	146.06	145.89	145.90	145.92	145.92	145.92
Reserves and Surplus	130.50	136.11	150.52	173.06	176.38	165.53	114.74
Secured loans	165.46	232.58	123.75	124.12	140.12	175.32	55.59
Unsecured loans	—	—	—	—	25.00	—	55.90
Current liabilities and provisions	441.22	390.37	227.85	240.63	279.73	265.38	189.12
Total	883.24	905.12	648.01	683.71	767.15	752.15	561.27

Assets	1960-61*	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Fixed assets	149.33	199.86	197.83	195.08	193.62	205.00	198.33
Land purchase suspense	1.66	1.66	1.36	1.39	1.45	1.51	1.31
Investments	2.87	2.62	2.62	1.43	1.43	1.45	1.49
Current assets, loans and advances	729.38	700.98	446.21	485.82	570.65	544.19	360.14
Total	883.24	905.12	648.02	683.72	767.15	752.15	561.27

*The position was as on 30th June 1961.

Source : Annual Reports of the Company.

APPENDIX 2

Asset Structure of NSF (Net Block)
(Rupees in lakhs)

Name of asset	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
1. Lands	—	—	1.42	1.42	1.42	1.42	1.42
2. Buildings (housing machinery)*	21.54	26.21	28.69	27.98	27.42	30.30	29.04
3. Buildings (unconnected with machinery)**	30.70	39.66	48.65	54.34	55.74	56.04	54.89
4. Plants Machinery	31.16	78.74	77.49	72.92	69.25	73.36	70.11
5. Light railway and railway siding	9.24	8.25	7.44	7.34	6.64	6.00	5.41
6. Furniture and equipment	3.35	4.16	3.58	3.82	3.71	3.56	3.51
7. Motor cars, lorries, cycles etc. (vehicles)	0.96	1.67	1.59	2.19	3.57	4.04	3.14
8. Live-stock	—	0.03	0.06	—	—	—	—
9. Capital works in progress (including materials at site)	27.69	16.27	5.34	1.24	2.17	6.58	6.80
10. Agricultural lands	—	—	23.57	23.83	23.70	23.70	24.01
Total	124.64	174.99	197.83	195.08	193.62	205.00	198.33

*This item from the year 1962-63 is known as factory buildings.
**This item from the year 1962-63 is known as non-factory buildings.

APPENDIX 3

Pattern of Current Assets of NSF

(in Rs. lakhs)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Stores and spares	76.13	62.99	48.13	50.95	57.28	52.03	60.88
Stock of manure	—	—	11.97	11.80	2.59	19.01	35.67
Stock-in-trade	362.44	309.40	46.23	51.30	168.52	251.62	49.38
Cultivation in progress*	67.01	79.62	74.90	82.35	77.21	66.86	70.54
Sundry Debtors	7.51	10.66	7.48	6.95	11.21	7.88	7.49
Other items	6.21	10.02	9.07	7.96	11.45	8.56	5.32
Total	519.30	472.69	197.78	211.31	328.26	405.96	229.28

*Prior to 1962-'63, this item was known as cane plantation in progress.

APPENDIX 4
Secured and Unsecured Loans of NSF
(in Rs. lakhs)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Secured Loans :							
(*a*) Cash credit account with the State Bank of India							
1. By hypothecation of sugar stock	90.46	35.58	40.97	48.00	42.47	43.33	35.97
2. By pledge of sugar stock	—	194.00	14.78	8.62	95.15	127.11	14.62
3. By collateral security	—	—	65.00	65.00	—	—	—
(*b*) Special loan within the cash credit account as mentioned in (*a*) above.	75.00	—	—	—	—	—	—
(*c*) Loan obtained from Government of India under Subsidised Industrial Housing Schemes	—	3.00	3.00	2.50	2.50	4.88	5.00
Total	165.46	232.58	123.75	124.12	140.12	175.32	55.59
Unsecured Loans :							
(*a*) Short term loan obtained from Govt. A. Pradesh	—	—	—	—	25.00	—	11.12
(*b*) Fixed Deposits	—	—	—	—	—	—	23.93
(*c*) Loan from State Bank of Hyderabad on the collateral security by pledge of shares belonging to A.P. Government	—	—	—	—	—	—	20.85
Total					25.00		55.90

APPENDIX 5

Depreciation, Interest and Certain Appropriations of Surplus

(in Rs. lakhs)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
1. Provision for depreciation on fixed assets	6.93	11.31	12.51	15.80	13.98	13.59	12.61
2. Provision for development rebate	0.60	8.22	0.52	1.92	0.63	2.28	—
3. Interest on cash credit account and guarantee commission on cash credit to Government of Andhra Pradesh	6.76	17.66	14.09	5.60	15.12	17.80	9.68
4. Proposed dividend on :							
(*a*) Preference shares	1.93	2.42	1.94	1.94	1.94	1.94	—
(*b*) Ordinary shares	25.39	19.87	22.02	19.82	16.52	13.21	—
6. Transfers :							
To reserve	16.38	—	0.33	4.37	—	—	—
From reserves	—	—	—	—	—	20.00	—

Note : (1) All the proposed dividends are subject to deduction of tax.
(2) In the year 1966-67 there were no profits.

Source : Annual Reports of the Company.

IMPLEMENTATION OF THE SCHEME FOR THE PRODUCTION OF HIGH-YIELDING SEEDS IN THE STATE OF MAHARASHTRA

P. R. DUBHASHI

A significant break-through in agricultural technology and organisation has for long been the principal objective of Indian planning. A scheme on which much reliance has been placed for the realisation of this objective has been the production and distribution of hybrid seed. It is this scheme and the process of its implementation in the office of the Director of Agriculture of Maharashtra State that forms the subject matter of the present case study. The programme for the production and multiplication of high-yielding hybrid seed is of a complex character, involving as it does the activities of a large number of scattered individual units as also requiring a unique combination of technical meticulousness and administrative drive.

Use of improved seeds was accepted as one of the important measures in the plan-programme for stepping up agricultural production in the country. According to the accepted procedure of the scheme, nucleus or breeder seed produced in agricultural research stations and sub-stations was to be multiplied on the *Taluka* Seed Mulitplication Farms. The resultant produce known as foundation seed was further multiplied in the fields of registered seed growers for eventual general distribution as improved seed. In Maharashtra, the scheme for multiplication and distribution of improved seed was worked in the state sector upto the stage of production of foundation seed and thereafter, it was implemented by the *Zilla Parishads*. The *Zilla Parishads* were expected to obtain foundation seed from the seed farms, supply them to the registered growers and arrange to procure improved seed for distribution amongst the cultivators. Ordinarily, the work of distribution of improved seeds was to be done by the cooperative societies.

NSC'S ATTEMPTS TO POPULARISE THE SCHEME

The Union Government established the National Seeds

Corporation (NSC) in 1963 to act as the spearhead of the programme of production and distribution of hybrid seed. Though the formal date of establishment of NSC was 1963, it had been functioning informally even since 1962. The Corporation concentrated in the initial years on hybrid maize. The General Manager of the Corporation wrote on August 30, 1963 to the Director of Agriculture, Maharashtra State, Poona, that "the production of hybrid maize all over the country is being looked after by NSC and Maharashtra has been considered suitable for its production." The letter also indicated the criteria for the selection of seed growers. In a continuing letter, dated September 9, 1963, NSC pointed out : "The present programme of the Corporation lays emphasis on the production of hybrid maize seed which forms an important plank of the Third Plan. The Corporation has entered into contracts with a number of progressive farmers for the production of the foundation seed of hybrid maize. It is proposed to lease out cultivation as well as processing machinery to such growers and producers. In leasing out this equipment, the Corporation will naturally take into account the existing facilities in the various States and the rates being charged by the State Agricultural Departments for the loaning of their equipment." The letter elicited information on the subject from the Director of Agriculture.

In his reply of October 9, 1963, the Director of Agriculture welcomed the selection of Maharashtra State by NSC for the production of hybrid maize. He also suggested that, in addition to the progressive farmers, the Government seed multiplication farms could also be selected by the Corporation for production of seeds.

Regarding selection of areas for the production of hybrid seed, NSC advised the Maharashtra Agricultural Department: "Consolidated blocks will have to be selected for seed-production. If this is done, the processing plant can be set up at a convenient central location and the seed from near by production fields can be brought to the plant for drying and processing." About the State Director's suggestion regarding selection of Government seed multiplication farms, the letter pointed out that the major difficulty will be "one of proper supervision, check, inspection of crop and processing of seed on account of these farms being too far spread out."

At this early stage, it would appear that it required some amount of salesmanship with the State Government authorities, before they came to accept the programme and implement it with the necessary enthusiasm.

In the letter of October 21, 1963, to the Director of Agriculture, the General Manager of NSC wrote: "Our research workers in the co-ordinated maize scheme, in collaboration with the Rockefeller Foundation, have developed the hybrids which are suited to the different regions in the country and within a short period of their release, they have become quite popular among the progressive farmers. Demonstrations carried out in 1963 proved the ability of the hybrids to outyield local varieties by a substantial margin. Thus the hybrids, apart from increasing food production, will give good money returns to the cultivator. A limitation in the rapid extension of area under hybrid maize is the seed supply. The hybrid seed is to be used afresh every year and it must have proper genetic qualities. The production of foundation seed and the certification of the double cross seed has been entrusted to NSC. Subsequently, the activities of the Corporation may include production of high quality foundation seed of hybrid jowar, vegetables and other crops." The General Manager reinforced his case by drawing attention to the recommendation of the Joint Conference of the State Ministers of Agriculture and Community Development that State Governments should give special attention to the programme of cultivating hybrid maize in consultation with NSC.

Meanwhile, the Government of India took certain steps to intensify the programme. The Central Ministry of Food and Agriculture wrote on December 18, 1963 to all the State Governments, drawing their attention to the recommendation of the Joint Conference of State Ministers of Agriculture and Community Development. The letter went on to say: "According to the present arrangements, hybrid maize seed growers and producers obtain their foundation seed from NSC. They also enter into contract with that Corporation in accordance with which the Corporation inspects the crops from sowing to harvesting and processing and the seeds are certified by the Corporation if they meet the minimum standards laid down.

"Government of India proposes to make available credit facilities to the seed growers and producers through the State

Governments. Government of India will sanction to each State Government the amount of short term loan to be made available for each season, and, at the same time, NSC will furnish a list of seed growers and producers to whom the loan is to be disbursed. Credit facilities may be provided by Government of India on the basis of Rs. 200 per acre of seed production. The loans from the Government of India to the State Governments will carry interest at the rate of 6 per cent per annum and will be repayable in one instalment of principal and interest within 18 months of the date of withdrawal of the loan, provided, however, that if the loan and interest are paid promptly and punctually, on the due date, interest at 3½ per cent per annum will be charged.

"The State Governments are accordingly requested to intimate their concurrence to these arrangments".

The Government of India decided that the loan facilities should be provided to the seed growers and producers only through the State Governments. The State Governments had to decide whether they would disburse the loans through the cooperative societies or through other channels. But, whatever the agency adopted by the State Governments, they had to ensure that the loan was paid to the seed producers and growers promptly but only after taking into account the repayment capacity, security, etc., as in the case of other short-term loans disbursed by the State Governments. The only difference was that in the amount of loan to be disbursed, the Government of India was prepared to provide Rs. 200 per acre. Further, NSC would intimate the names of seed growers and producers and the acreages to be sown by them, so that the usual process of allotment of loans would be obviated. The Government of India requested the State Governments to make these facilities known to the progressive farmers so that NSC could go ahead enrolling the seed producers and growers for *kharif* 1964.

The Maharashtra Government, however, felt that the production of double hybrid maize seed was a new venture and required technical knowledge for sowing, detasseling, etc. Its cultivation also involved heavy investment to the tune of Rs. 300 per acre, though ultimately, it was a very paying proposition. Taking all these facts into consideration, the Agricultural Department decided to undertake the production of double hybrid maize seed departmentally until progressive cultivators of the State came to

know the technique and were convinced of its being a very paying proposition. No credit facilities were, therefore, required for the Maharashtra State, for the purpose during the year 1964-65.

NSC sent a circular letter on April 1, 1964 to all the Directors of Agriculture: "As a Director of Agriculture, you are in a position to contribute substantially to this programme, which will not only increase food production but also provide raw material for starch and other industries and save the country from imports. Further, the farmers who get hybrid maize seed are assured of genetic purity and high germination and other aspects of good seed. This is because our seeds are produced under strict technical supervision, mechanically dried and processed, cleaned and graded and are finally packed in convenient cloth or polythene bags and sealed. Sealing is an important protection to the farmers as it prevents adulteration. Further, the seeds are tested in Government laboratories and the results of the tests are indicated in a tag attached to the seed bag." The letter also asked for estimate of requirements of hybrid maize seed for the *kharif-rabi* 1965 so that the Corporation could plan its production programme accordingly. The letter also warned that potential yield in hybrid maize could be realised only if the standard recommended doses of fertilisers were applied and other recommended cultural practices were followed.

NSC, meanwhile, had also prepared an illustrated catalogue of the seeds being developed by them and sent 10 copies of these to the Director of Agriculture, Maharashtra State for distribution to the concerned officers. NSC wanted to know the names and addresses of the field officers, block development officers, etc. who were handling the 'grow-more food campaign' and to whom copies of the catalogue need be sent.

In their forwarding letter, they added, "As you know the Corporation was set up only about a year back and its activities with regard to the development of quality seeds on large commercial basis have not yet expanded to the extent to meet large number of demands for vegetable and other seeds. In an effort, however, to make the slogan of "quality seeds for bigger yields and higher profits" better understood, the Corporation has primarily to muster your support to get the recognition of its activities by the farmers who would be required to be closely associated with this organisation in the long run."

The Indian Council of Agricultural Research in their letter of May 14, 1965 to all the Directors of Agriculture pointed out that under the accelerated hybrid sorghum project, they had brought out a hybrid sorghum seed, CSH-I. The work of the multiplication and sale of this hybrid sorghum seed had been entrusted to NSC. The letter pointed out that this organisation had already published the good points of this programme in the NSC Bulletin of January 1965. This hybrid seed was suitable for early and medium duration *kharif* season to be sown in July and harvested in October.

A policy letter dated May 19, 1964 from the Government of India to the various State Governments explained the guidelines of the Programme during the Third Five Year Plan. "It is contemplated to cover at least 5 per cent of maize area by hybrids by the end of the Third Five Year Plan. For fulfilling these targets and also for ensuring further extension of area, it is necessary that a bold programme of popularising hybrid maize must be taken up. Demonstration in the cultivator's field is an important extension tool in achieving this objective ....Hybrid maize has a potential for very high yields and for obtaining these yields, judicious manuring is necessary. It has, therefore, been decided that the hybrid maize demonstration should be combined with the programme of fertilizer demonstration on maize by utilizing the fertilizers provided under the centrally sponsored demonstration and training scheme, and hybrid maize seed will be supplied free of cost by NSC." The letter asked for immediate action to be taken for selection of cultivators, selection of sites, supply of fertilizers, etc. for implementing the hybrid maize demonstration programme for the year 1964-65.

Meanwhile, a few non-official organisations (*e.g.*, India Crop Improvement and Certified Seed Producers' Association, N. Delhi and Maharashtra Hybrid Seeds Corporation, Bombay) attempted to popularise the scheme.

WORK DONE IN MAHARASHTRA TILL 1965

The question of rapid expansion of area under hybrid maize, jowar and bajra was discussed with the Member, Planning Commission on May 17-18, 1965 and subsequently with the Secretary, Finance of the Maharashtra Government. For this

discussion, notes were prepared by the Millet Specialist of the Maharashtra State. These notes (see Appendix I) provide the necessary background information about the programme and deal with the following points :

1. How hybrid maize, jowar and bajra is evolved.
2. Progress made in evolving the varieties by the Rockefeller Foundation, the Government of India and the State Department of Agriculture.
3. Programmes in this behalf followed in America and other States in India.

The steps taken till then by the Maharashtra Government may be briefly summarised. Varieties of hybrid maize had been evolved by the Indian Council of Agricultural Research in close collaboration with the USAID and Rockefeller Foundation. Of these, the Deccan hybrid makka was very suitable for the maize growing areas of the Maharashtra State.

Trials of Deccan hybrid maize were taken in various districts of the State. Demonstration plots were also laid under the supervision of NSC. In the trials, the Deccan hybrid had consistently given higher yields than local maize ranging from 51 per cent to 105 per cent. The results of the trials are given in Table 1.

TABLE 1

No. of demonstrations	Local maize with local practices	With recommended practices		
		Local maize :	Deccan :	Ranjit
10	10.4 B. Mds.	20.3 B. Mds.	30.8 B. Mds.	30 B. Mds.

The production of hybrid maize seed was begun in the state in 1962-63 at the Agricultural School, Manjri, district Poona. The year and the area under hybrid seed production, during the previous 3 years are given in Table 2.

Besides this production of seed on Government Farms, private cultivators had also taken up production of seed under the supervision of NSC as certified seed growers from 1963-64 and 1964-65.

TABLE 2

		Deptl. Institution where production of seed was undertaken	Area under seed production	Seed production	Area covered
1962-63	1.	Agric. School Manjri, Poona	5 acres	5148 kg.	858 acres
1963-64	1.	——do——	5 acres	2073 kg.	1165 acres
	2.	Tal. Seed Farm, Mohol, Sholapur	3 acres		
	3.	——do——	3 acres	3722 kg.	
			11 acres		
1964-65	1.	Agric. School Manjri, Poona.	17 acres	8352 kg.	2108 acres
	2.	Tal. Seed Farm, Mohol	6 acres	1700 kg.	
	3.	—do—, Sholapur	7 acres	2600 kg.	
			30 acres		

PLANS FOR 1965-66

During 1965-66, it was planned to produce hybrid maize on an area of 90 acres on Government farms as below:

TABLE 3

		Acres
1.	Gram Sevak Training Centre, Manjri, Poona	30
2.	Taluka Seed Farm, Ambabad, Poona	20
3.	Taluka Seed Farm, Kashti, Ahmednagar	15
4.	Trial-cum-demonstration Farm Kashti, Ahmednagar	15
5.	Taluka Seed Farm, Khed, Poona	5
6.	Taluka Seed Farm, Charholi, Poona	5
	Total :	90

In addition, private cultivators were also expected to produce hybrid maize seed in 540 acres during 1965-66.

The production of seed at the estimated yield of one tonne per acre was expected to be 90 tonnes on state government farms and 540 tonnes on the farms of the certified seed growers. This seed at the rate of 6 kg. per acre would be sufficient to cover approximately 1 lakh acres of area under maize in 1966-67.

The state aimed at the establishment of 240 seed farms with an area of 15372 acres by the end of the year. The foundation seed

produced from these farms during 1964-65 is given in Table 4.

TABLE 4

Crop	Production in quintals.	Yield per acre in quintals
Paddy	5868.32	4.87
Kharif jowar	3085.71	3.78
Bajra	901.50	1.26
Rabi jowar	4403	3.2
Wheat	4544	2.5
Gram	1129	0.88

The production of foundation seed in the state was about 53 per cent of the target; the shortfall was attributed to low per acre yield on seed farms.

The state had as large an area as 18 million acres under the major millets, jowar (*Sorghum vulgare*), bajri (*Pennisetum typhoideum*) and maize. But the yield of these crops from the existing varieties was very low, compared with those of hybrid varieties. The state had under trial a few hybrids of *kharif* jowar developed at Nagpur and of *rabi* jowar developed at Parbhani. But, since they were likely to take a few years before release for general cultivation, it was proposed to conduct trials and simultaneously release the "cooperative hybrids" developed by the Indian Council of Agricultural Research, in collaboration with the Rockefeller Foundation experts under the all-India coordinated programme.

In view of the great demand for hybrid seed, the programme for 1965 had to be revised. It was planned to cover 109 acres in government farms and 760 acres in private farms. This was for maize. As for jowar and bajra, the target for the *rabi* season for production of seed on Government farms was : jowar : 40 acres : bajra : 16 acres.

In addition to this, hybrid jowar and bajra produced by farmers under the supervision of NSC during 1965-66 was as follows : Hybrid jowar : 45 acres : Hybrid bajra : 7.5 acres.

There was a discussion between the offices of NSC and those of the Maharashtra Agricultural Department on October 16-18, 1965. The State wished to raise the target of acreage under *kharif* jowar from 50,000 in the first year to 2 lakhs in the

5th year and wanted large quantities of hybrid seed and parent seed production for the purpose.

The reaction of NSC was that the plan was welcome but there were restraining factors. The necessary insecticide, Thimet was in short supply. Moreover, in hybrid seed production, experience was most important, and the state should consult experienced seed producers.

The officers of the State Government had not consulted them since they were in touch with NSC. Moreover, in a rapidly expanding programme, new cultivators had to be enlisted and the Department was already in touch with progressive farmers in the state. At the same time, the State Farming Corporation was only chosen as being the largest single organisation capable of tackling this new programme. The State Government stated that, in their Agricultural Department, they had highly trained plant breeders for guiding and advising all concerned.

NSC was in favour of seed being produced by private cultivators, since the Government agency would bring down the price of the seed and kill the incentive of the private seed producers. The Department's representative pointed out that the State Farming Corporation was itself a commercial organisation and would look after its own interest. As for the Department, it wanted a fair price both for the seed producer and the consumer.

Regarding installation of machinery for processing seed, it was pointed out that hybrid seed producers should be in a compact block so that the seed from different producers can be processed in a central place. This point should be borne in mind in selecting prospective seed producers. A unit of 500 acres within a radius of about 5 miles was considered suitable for a medium size machine.

Regarding other points, the State Government officials stated : "Whereas in the long run, the bulk of the hybrid seed of jowar, bajra and maize would be produced by private agencies, approved by NSC on the advice of the State Department of Agriculture, a small quantity of the hybrids would also be produced annually by the State Department of Agriculture on government farms, registered with NSC. This would serve to train the private seed producers as well as the state supervisory staff and would also to some extent supplement the production of hybrid seed by private agencies till adequate seed would be

produced by the latter."

The anxiety of NSC to build up a seed industry on the basis of private enterprise was necessarily based on the assumption that the prices of the hybrid seed would be such as to provide the necessary incentive to the private seed growers. This was indicated in the letter of Shri Y. R. Mehta, General Manager of the Corporation to Dr. Ghatge, Director of Agriculture. "The resources of the Government, both Central and State, are limited and because of the stringency of funds, many plan programmes are being cut. This makes it necessary to allow profits in seed production and distribution so as to attract good people into seed production and distribution business. We should avoid depressing the prices to unprofitable levels.

"In the production of hybrid maize seed, besides the additional costs due to foundation seed, transport, roguing, detasseling, etc. there are the costs of processing which includes sorting, drying which is done mechanically, cleaning, grading, treating with insecticide and sealing of the bags. Further close supervision is necessary at all stages to ensure quality of seeds. This necessarily involves employment of qualified personnel."

The programme for summer 1966 was perhaps influenced by the discussions of the state authorities with Shri B. Sivaraman, Secretary, Department of Agriculture, Government of India. Copies of the notes recorded by him were sent by the Private Secretary to the Chief Minister in a note dated December 30, 1965, to the Minister for Agriculture, and Secretary, Agriculture and Community Development. The extracts of the note are as follows :

"We had originally targeted for jowar foundation seed production on 2200 acres for the whole of India. This area has more or less been allotted and Maharashtra has been given 501 acres for seed production. The various states were consulted about their demand of hybrid sorghum seeds for 1966-67 *kharif* season and the demand so far received is only 4.81 lakhs of acres, out of which Maharashtra will be growing 2.17 lakh acres. As the demand is more than the seed that may be produced in 2200 acres, we have arranged with the Rockefeller Foundation to rush the female lines MSCK-60-A and 6 tons have already been shipped and will reach India in the middle of January and another 8 tons are being booked shortly and will reach India in

February. This seed will be enough for a further 4666 acres. If Maharashtra is willing to organise and grow the seed, we can allocate seeds for 4000 acres without any difficulty. It is suggested that a firm demand may be placed by Maharashtra on NSC and action taken to organise the production. There was some nicking trouble in Maharashtra last year. Therefore, experts have to be especially careful in closely supervising the production and taking corrective steps at the right time to ensure proper nicking. In our calculations, we have assumed an average seed production of 350-400 kgs. per acre. By good husbandry it should be possible to reach 600—700 kgs. per acre. It is suggested that Maharashtra who are keen on this programme may take special steps to organise good seed production."

FILLIP GIVEN BY THE CHIEF MINISTER

The question of hybridisation and multiplication of seed was discussed at the 28th meeting of the High Level Agricultural Production Committee held on November 5, 1965. It was at that meeting that the Chief Minister made his famous pronouncement that "the Government of Maharashtra had firmly resolved to tackle the critical food situation as a battle for survival and make the state self-sufficient in respect of foodgrains within the next two years."........."In order to achieve this goal, it is necessary to initiate and execute a series of measures, the most important of which is to cover the cultivable area by high-yielding hybrid seeds. According to the Government of India's plan, an area of 40 lakh acres each is to be brought under hybrid crop of jowar, bajra and maize in the country. Considering the area under these crops in our state, the share of Maharashtra works out to 15 lakh acres of jowar, 5 lakh acres of bajra and 2 lakh acres of maize." The Chief Minister directed that "in view of the pressing necessity to achieve self-sufficiency in foodgrains, this target should be doubled and achieved within three years." He also directed that "a Committee consisting of the Chief Secretary, the Secretary, Finance Department and the Secretary, Agriculture and Cooperation Department, should be constituted to go into this problem thoroughly and draw up a phased plan for putting through a crash programme for hybridisation and multiplication of seeds." The Chief Minister further directed that the overall responsibility for the hybrid

programme would rest on Dr. Vaidya, Additional Director of Agriculture. He should be in constant touch with the Secretary, Agriculture and Cooperation Department and Minister for Agriculture to whom he should report at once any particular difficulties or bottlenecks in the quick execution of this programme.

The Chief Minister, during the discussions at the High Level Committee meeting held on November 11, 1965 had indicated broadly the programme for summer, 1966. According to him, Maharashtra was likely to get additional 12 tons of hybrid jowar seeds of both male and female parents from NSC for seed multiplication in January 1966. Out of this quantity, 6 tons were already available with NSC and it would get 6 tons more from U. S. Maharashtra should, therefore, be prepared to accept the seeds which would be sufficient for sowing 3,000 acres for multiplication programme in January 1966. The produce of this would be available for sowing in June 1966 over an area of approximately 3 lakh acres. 1,000 acres out of this were to be located on the lands of the State Farming Corporation, Maharashtra State, at some of their units, *viz.*, Walchandnagar, Sakharwadi, Changdeowadi and Tilaknagar, whereas another 1000 to 2000 acres would be available as indicated by the Secretary, Agriculture and Cooperation Department in the Ganganagar Sugar Factory area, irrigated by the Godawari canal or river.

At this High-Level Committee meeting, some members expressed concern as to whether all the area sown with seed was being looked after properly. A decision was, therefore, taken that fullest possible help of technical officers would be taken so that seed multiplication programme would not suffer on account of lack of technical supervision and guidance. Shri K. R. Gupta, Technical Officer (II) was accordingly instructed to inspect the State Farming Corporation area once in 10 days. Professors and Lecturers in Botany of Agricultural Colleges were also asked to inspect farms nearer to their headquarters.

One of the important questions to be settled was about the areas on which the foundation seed was to be produced. In his letter of November 16, 1965, Dr. K. G. Joshi, Joint Director of Agriculture (Extension) wrote to Dr. Y. R. Mehta, General Manager of NSC : "In our opinion, the programme of

production of foundation seed should be as far as possible on Government research farms and the farms of corporations like the State Farming Corporation of Maharashtra on which the staff of NSC and that of the State Government would have full control." This was particularly pressed because a certain percentage of admixture of A and B parents was observed that year on the farms of the registered growers and governmental institutions.

NSC informed the Director of Agriculture on November 25, 1965 that they were deputing Shri D. S. Rana, one of their ablest officers, who had recently returned after training in the U.S. to Maharashtra for arranging hybrid seed production on about 5000 acres, provided suitable farmers with irrigated well-drained land were available in convenient blocks." The Director in his reply stated that arrangements were being made to find suitable growers for covering that area. The allocation of 5,000 acres was as follows : 1000 acres of Ganga 101 maize; 500 acres of maize Ranjit; 2000 acres of CSH 1 jowar and 1500 acres of HB 1 bajra.

The Director instructed Shri K. R. Gupta, Technical Officer (II) to contact the *Parishad* Agricultural Development Officers, Sangli, Satara, Kolhapur in the first instance and later on other *Parishad* Agricultural Development Officers and to arrange as much area as possible for the seed production programme. In his tour note dated November 30, 1965, Shri Gupta pointed out that the area would have to be compact and spread over a few villages. He, therefore, proposed the idea of establishing the seed villages, wherein all the available irrigable area in the village would be put under one crop.

At the State Farming Corporation meeting held on November 27, 1965, the Chief Minister enquired about the progress of work in connection with the multiplication of hybrids of jowar, bajra and maize and the area which the State Farming Corporation was making available for the same. He was informed that the State Farming Corporation would make at least 3,000 acres available by January 1966, and that the remaining 2,000 acres would be secured from the cooperative sugar factories, private growers and some of the seed and research stations where water facilities were available. The Chief Minister appreciated the idea and emphasised that full advantage should be taken of the

cooperative sugar factories in the programme. He further added that they should immediately place a demand for the seed of parents to cover an area of 10,000 acres instead of 5,000 acres of all types of hybrids and arrangements should be made to cultivate the parents so that, during the next summer season beginning in January 1966, they would be available for distribution to cultivators. When he was informed that they were already getting maize seed to cover an area of 15,000 acres, he observed that they should try to cover an area of 50,000 acres and have an adequate quantity of parent seed of jowar, bajra and maize to cover an area of 10,000 acres.

The enthusiasm of the Maharashtra Government about this scheme is revealed in a letter dated December 1, 1965 from Dr. K. G. Joshi, Joint Director of Agriculture (Extension) to the Superintending Agricultural Officer, Aurangabad Division, Aurangabad : "The Government of India would be supplying foundation seed of parents of jowar, bajra and maize by about June 15 for the production of hybrid seed of these crops during the coming summer season. The plantation will have to be completed by January 15-25, 1966 and harvesting of all the three crops would be in the middle of May and hybrid seed made available for planting during the ensuing *kharif* season."

NSC organised a training class at New Delhi from December 13, 1965 for a period of two months, with a view to train agricultural technicians to handle production and processing of hybrid seeds of jowar, maize and bajra.

In appreciation of the role played by the Maharashtra Government in implementing the scheme, NSC wrote on December, 3, 1965 to the Secretary, Food and Agriculture Department of Maharashtra : "We are happy to note that the Director of Agriculture is arranging the production of hybrid seeds of jowar, bajra and maize on 5500 acres in the coming summer season. We are arranging the supply of foundation seed for covering the above area—2,000 acres of hybrid jowar, 2000 acres of hybrid maize and 1,500 acres of hybrid bajra. In doing so, we are diverting the bulk of available foundation seed to Maharashtra State. We believe Maharashtra has great potential in respect of all the three hybrids. However, to meet our obligations in respect of other states, we have to procure back from you the following seed produce: A third of the production

of hybrid jowar ; half of the production of hybrid bajra ; and three-fourths of the production of hybrid maize.

In addition, some private seed producers would also produce hybrid seed in Maharashtra under our supervision. The areas of seed production are being finalised in consultation with the Director of Agriculture and Maharashtra Farming Corporation. Once these are finalised, our engineering staff will recommend plans for setting up seed processing plants for proper drying, cleaning, grading and bagging of seeds. We will also be locating our trained agricultural staff to guide the seed production and to inspect and exercise internationally accepted quality control measures." The Bulletin of NSC indicated cultural practices to be adopted for high-yields of hybrid maize, and hybrid sorghum. These indicated the seed rate, fertiliser doses, control over pests, land preparation, intercultivation drainage, and irrigation. The seed rate indicated for hybrid maize was 6 kilos of seed per acre, in case of bajra 1½ to 2 kgs. per acre for direct planting and 1 to 1½ kgs. per acre through nursery and for jowar, 5 kgs. per acre.

IMPLEMENTATION

The programme for the production of certified hybrid seed of maize, jowar and bajra in the various districts during summer 1966 (January 1966 to May 1966) was chalked out in a letter written by the Joint Director of Agriculture to all the Chief Executive Officers of the *Zilla Parishads*. He emphasised the need for securing the areas before December 31, 1965 so that crops can be sown upto middle of January 1966 and harvested by the end of May 1966 and seed processed and distributed in May, 1966 for sowing in *kharif* season of 1966-67. The plan was to have at least 10 lakh acres during the year 1966-67 and about 60 lakh acres during 1967-68. It was, therefore, necessary to produce hybrid seed for an acreage of about 10 lakh acres before the *kharif* season of 1966 which would commence in the first week of June 1966. Ten private growers registered with NSC were expected to produce hybrid seed for 4.5 lakh acres before the *kharif* season of 1966. An additional area of 5500 acres would have to be covered in the summer of 1966 to produce hybrid seed required for the remaining 5.5 lakh acres and the programme for this area was as follows :

Maize (Deccan, Ranjit and Ganga-101)	2,000 acres
Jowar (CSH-1 and CSH-2)	2,000 acres
Bajra (BH-1)	1,500 acres
	5,500 acres

NSC had agreed to give the necessary foundation seed of parents.

The organisation of work indicated for summer 1965-66 was as follows: The Chief Executive Officers and *Parishad* Agricultural Development Officers of the districts would be the main organisers of the programme. They were to organise a meeting of various officers concerned and assign the responsibility to the campaign officers of the district or any other Class II officer in consultation with the Superintending Agricultural Officer. The sugar factories will share the responsibility with the *Parishad* Agricultural Development Officers. Technical guidance to the districts would be provided by Professors of Agricultural Botany of the Agricultural College, Poona. The Chief Executive Officers would send their campaign officers or the District Agricultural Officer or any other suitable Class II Officer for three-day-training programme organised at the Gramsevak Training Centre, Manjri, District Poona, from December 26-28, 1965. The district officers on return from training should train the team of Agricultural Officers, Agricultural Extension Officers and Agricultural Assistants in the district who would supervise the district programme. Their training would be completed by January 5, 1966. The district team should prepare a detailed list of cultivators of each village, showing the acreage under the various crops. Isolation of the areas producing these seeds, as insisted on by NSC was an important factor to be borne in mind. As far as possible, the programme should not extend beyond two or three villages in each district and all the areas under production should be as compact and contiguous as possible. Necessary cooperation of local irrigation officers must be obtained to provide water for the required acreage. The crops must be fertilised at the doses given earlier and the *Parishad* Agricultural Development Officers should ensure that these fertilizers reach the cultivators well in time. Finance had to be provided by the central cooperative banks of the district in addition to loans given by the

Agriculture Department. The processing of the certified seed would be done in the processing units which were being installed at various districts.

The Secretary of the Maharashtra Agricultural Department was anxious to know the progress of the scheme from Dr. Vaidya. He desired that the entire machinery of men and equipment should be geared to this task to the maximum possible extent and hoped that the organisation for this programme had already been mobilised. Dr. Vaidya in his reply said that detailed plans for producing the hybrid seed of maize, jowar and bajra on an area of about 9,000 acres during the *rabi* and ensuring summer season had been worked out, and assured that maximum efforts were being made to produce hybrid seed on an acreage during the then current *rabi* and the ensuing summer season as to have adequate commercial seed to cover an area of 10 lakh acres in the *kharif* and *rabi* seasons of 1966-67.

Detailed technical instructions were conveyed by Dr. Joshi to the Chief Executive Officers in his letter of December 23, 1965 on the production programme of hybrid seed for all the three crops.

A meeting of the private producers of certified seed was held in the chamber of the Secretary to Government, Agriculture and Cooperation Department on December 7, 1965 when Dr. Vaidya and Dr. Joshi were also present. The private seed growers expressed difficulties regarding supply of fertilizers and import of machinery, particularly rotary hoes, etc.

Dr. Vaidya in a letter pointed out that he had some difficulties with the Irrigation and Power Department and suggested that this should be taken up at the Secretariat level and the Irrigation and Power Department should be asked to give top priority to this programme.

As suggested by Dr. Vaidya, coordinating action with the Irrigation Department for the supply of water was taken at the Secretariat level. A note recorded by Dr. Shaikh, Secretary, Agriculture and Cooperation Department on December 21, 1965 said, "The Chief Minister was pleased to take a meeting this afternoon with the Secretary, Agriculture and Cooperation Department, Secretary, Irrigation and Power Department, Chief Engineer and Chief Engineer (Minor Irrigation), and directed that the following points should be paid special

attention to by the Irrigation and Power Department.

"For hybrid parents seed stock production, the Department of Agriculture requires in all about 10,000 acres to be covered at various places including Poona, Manar, Koyana, Bhatnagar and other irrigation works and canals. The requirements of hybrid parent seed cultivation in the summer season should be given special attention and all efforts should be made to locate water resources and indicate them so that the Department of Agriculture, if necessary, will shift the areas of cultivation to such locations."

In a letter dated December 16, 1965, to the Additional Director of Agriculture, Dr. Shaikh pointed out : "If it is not feasible to get irrigation water in a district, the programme will be diverted where irrigation water is available. No seed should be wasted for want of proper coordination of irrigation water with the hybrid seed issued."

According to a circular letter dated December 31, 1965, the tentative break-up of the acreages given under the programme for the production of hybrid seeds of maize, jowar and bajra was as given in Table 5.

TABLE 5

District	Jowar	Maize	Bajra	Total
Sangli	800	850	250	1900
Satara	325	350	150	825
Kolhapur	250	200	—	450
Maharashtra State Farming Corporation (Toka unit)	250	250	250	750
Nasik	100	115	300	515
Nanded	200	175	—	375
Parbhani	200	175	—	375
Buldhana	65	60	25	150
Akola	60	75	25	160
	2250	2250	1000	5500

In January 1966, the Joint Director of Agriculture (Extension) wrote to the Chief Executive Officers that the despatch of foundation seed had already begun and that the seed for remaining acreages would be received within a few days. He emphasised that the seed should be lifted immediately and delivery taken and

arrangements made for sowing in the presence of the supervising officers of NSC.

At a meeting held in the chamber of Secretary to Government, which was attended by the Director of Agriculture and some progressive farmers on January 18, 1966, the progress in the production of certified seed was reviewed. The area under hybrid seed production during *rabi* season 1965-66 and summer season of 1966 would be 3066 acres under maize, 3177 acres under jowar and 1055 acres under bajra. Taking average multiplication ratio as 1 to 100, the hybrid seed produced for this acreage will be sufficient to cover the following areas during the *kharif* season of 1966-67.

Hybrid maize	:	acres	3,06,600
Hyrid jowar	:	acres	3,17,700
Hybrid bajra	:	acres	1,05,500

DIFFICULTIES IN IMPLEMENTATION

Various difficulties were encountered in the implementation of the programme. These difficulties were reflected in several communications between the various officers of the Maharashtra Government, NSC and the Central Government.

A letter from Dr. Vaidya, Joint Director of Agriculture, to Dr. Shaikh of January 23, 1966 mentioned that, by the end of January, hybrid maize seed sufficient for 1950 acres as against the demand of 2,500 acres and hybrid bajra seed for 1000 acres had been received and distributed. 6 tons of foundation seed of jowar from U.S.A. were expected to land on January 24, 1961. In his letter of January 14, to Dr. Vaidya, Dr. Shaikh pointed out that though the hybrid jowar patent seed for 4000 acres promised by NSC was expected to reach on the 24th and could be arranged to be despatched on the 25th itself, it was for consideration whether this would not be too late to sow the parent seed as the flowering would be towards the end of March when the temperature was likely to be 104-105° in the Deccan trap and in certain regions like Kolhapur, rains were likely to set in and this might adversely affect the programme.

The Additional Director informed Dr. Shaikh on trunk telephone that the opinion of the technical experts was that hybrid seed for seed multiplication should not be sown after February 7, and as such all seed that could not be sown before

that date or whatever seed would be received by about that date would have to be kept for sowing in the *kharif* season, *i.e.*, June or July for further multiplication. This seed should be stored in cold storage with a de-humidifier.

The question of the timeliness of sowing became a matter of considerable discussion. In his letter of January 25, 1966 to the Chief Executive Officer, *Zilla Parishad*, Sangli, Shri A. C. Saxena, Officer in charge, Seed Certification Centre, Poona, said: "In my opinion, it is too late for taking up the plantings. The late planted crop will come to flowering stage sometime in the second week of April when the temperature is expected to be about 109—110 degrees. This high temperature will not permit proper pollination in these crops. In order to get a successful crop, we should avoid this high temperature and plant the crops as early as possible."

Shri V. B. Malik of NSC pointed out that he had learnt that the deadline for sowing which had been fixed for February 28 was being further postponed. He pointed out the risk in such late sowings. If planting was as late as second or even first week of March, these crops would experience high temperature and dry weather during their flowering stage. Moreover, the crops would also be caught up by the rains on the maturity and this would definitely affect the quality of the seed adversely. He, therefore, suggested that they should adhere strictly to the dead-line originally fixed, *viz.*, February 28. Dr. Vaidya in his reply pointed out that the dead-line of February 28 was fixed only for Sangli district and it was because the summer crop would be harvested by second week of June, at least a fortnight before the rains; moreover, Shri Vasantrao Patil, the man behind this big seed multiplication programme in Sangli district had promised proper arrangements for storage of the produce in proper sheds. He had gone into the case of Sangli very carefully and had extended the date upto February 28 after due consideration of all factors and hoped that NSC would agree with him in extending the date. The *Parishad* Agricultural Development Officers were requested that no sowing should be done after February 28.

There were also some serious difficulties experienced as a result of pest attacks. The *Parishad* Agricultural Development Officer, *Zilla Parishad*, Kolhapur, for example pointed out some

difficulties in the implementation of the hybrid seed programme and asked for modification of targets. In his letter dated January 19 to the Technical Officer, he pointed out, "In *kharif* season, the results of hybrid jowar are quite promising but the experience in *rabi* season is discouraging due to heavy attack of stem fly and flea beetle. I am sure that in the summer season also there will be heavy attack of shoot fly and other insects. The control measures suggested by the department do not give 100 per cent effect. Due to this, the cultivators in this district are reluctant to take the jowar crop in hybrid seed production programme."

That these difficulties were not imaginary was in fact borne out by a rather frantic letter from the Deputy Seed Production Officer of NSC to Dr. Vaidya. It stated, "During the last two days, I visited some of the certified sorghum seed production crops at Walchandnagar and Sakharwadi. I noticed that there is a serious attack of shoot fly in about 50 per cent of the planted area, despite the fact that they have applied Thimet and are constantly using the spraying of Endrex 20 E.O. The attack of shoot fly is still persistent. You have a very ambitious sorghum seed production programme in about 4,000 acres which is yet to be planted. I am anxious that this programme should not meet with a similar fate. Since we are already in a very advanced state for taking up the sorghum seed production programme, we have to be perfectly forearmed to meet this shoot fly menace. Your Entomologist and the Plant Protection Department may kindly be apprised of this danger and they should be made available at each planting location so that necessary steps should be taken very well before infestation of shoot fly. Besides, your technical experts may please also keep a very close vigil on the seed production plot." On this letter, Dr. Vaidya observed as follows : "This is rather disappointing. Director of Agriculture may like to see and a copy may also be sent to Agricultural Entomologist and Plant Pathologist and Chief Plant Protection Officer intimating the places where foundation seed is given for hybrid seed multiplication and requesting them to visit the area. Also we must make sure that sufficient pesticides are kept at each place." Copies of the letter from the Deputy Seed Production Officer were sent accordingly to the Chief Plant Protection Officer, the Plant Pathologist and Agricultural Entomologist and they were requested to contact the

Parishad Agricultural Development Officers, visit the areas and advise the Plant Protection Officers in the district to take all possible measures to prevent the attack of shoot fly and other diseases.

The Agricultural Entomologist in his letter of February 22, to all the *Parishad* Agricultural Development Officers observed that the jowar crop was highly susceptible to the attack of various noxious pests like stem fly, flea beetles, stem borers, hoppers and aphids. It was, therefore, necessary to keep the crop free from attack of these pests by regular spray or dusting operations. He also requested them to communicate the exact sowing dates of hybrid crops so that the Plant Protection Officer could visit and give the necessary guidance.

Another difficulty in implementation of the programme was the need for adequate staff. The Secretary informed the Additional Director on January 28, 1966 that he had sent a telegram to the Director of Agriculture for appointment of 4 gazetted officers, eight agricultural officers, 16 agricultural assistants, 10 peons and adequate clerical staff immediately for the hybrid seed multiplication programme. 10,000 tons of fertilizer had been made available by the Regional Director of Food and had to be lifted.

Another important question was the adequacy of the staff of NSC. In his letter of January 25, 1966, the General Manager of NSC said : "In fact at present almost our entire staff is now in Maharashtra and Mysore, leaving a small skeleton staff at the Headquarters. I can assure you we have deputed as much staff as we possibly can in Maharashtra."

As regards the use of the college staff for supervision work, some difficulties were experienced. For instance, the Principal of the College of Agriculture, Dhulia, wrote to Dr. Vaidya that, in view of the importance of teaching work in those near-examination days, it might not be possible for the Assistant Professor of Botany at this college to camp at Nasik for prolonged periods of 15 to 20 days at a stretch.

Another question which constantly cropped up was the supply of seed to the private seed growers who had established direct contact with NSC. In his letter of January 28, 1966 to the Director of Agriculture, General Manager of NSC said, "We are giving all the six tons to you to be planted in

Maharashtra. Some of our old producers had sent their demands to us long back for jowar foundation seed. But due to non-availability, we could not supply them and we had committed ourselves to supply them from the imported stock. We request you, therefore, to be kind enough to supply the seed to our old producers." The supply was made to them according to the letter of the Department of February 1966.

On January 19, 1966, the Irrigation and Power Department of Maharashtra issued orders for water supply on nira canals during the hot weather of 1966 for 1000 acres of hybrid seeds including the estates of the Maharashtra State Farming Corporation on their sugar farms and to the progressive farmers. This supply was ordered on the assumption that the Maharashtra State Farming Corporation would not demand any post-seasonal watering for their standing *rabi* crops. If any water was required and consumed as post-seasonal, it would mean proportionate reduction in the hot weather sanctions of water for hybrid seed.

It is not clear whether regular progress reports were obtained from all the Superintending Agricultural Officers. A report of February 4, 1966 is, however, available in the records from the Aurangabad division only.

Some of the difficulties in the implementation of programme under the Jamgaon Lift Irrigation Project were indicated in the letter from the Superintending Agricultural Officer, Aurangabad to the Additional Director of Agriculture. In his letter of February 9, 1966, he says :

1. "Management of irrigation was not proper; the irrigation department should appoint canal inspectors or *patwaris* for this purpose.
2. Irrigation water could not be fully utilised due to defective lay-out of field channels.
3. Night irrigation could not be properly taken because the channels often breach as they are new and not yet properly set up.
4. Cultivators do not irrigate at night time.
5. Cooperation from cultivators is not being received as expected."

As regards the supply of fertilisers, the office of the Director of Agriculture requested the Chief Plant Protection Officer and

Compost Development Officer to take immediate action to place the required quantities at the disposal of the *Parishad* Agricultural Development Officers to enable them to further supply it to cultivators participating in the seed production programme.

Another request was to post a Seed Production Assistant to supervise the sowing of hybrid seed crops. On February 14, 1966, the office of the Director of Agriculture wrote to the Deputy Seed Production Officer, NSC to post these assistants immediately in the districts.

Dr. Mehta and Shri Veeraraghavan of NSC visited the various seed farms in the State and discussed their observations with Dr. Shaikh. Their remarks were communicated by Dr. Shaikh to Dr. Vaidya on February 8, 1966. Some of the points mentioned in the letter are : "The pest control and seed control work will have to be done continuously by insecticide squads. Sufficient men and pesticides should be at their disposal throughout, so that the parent seed does not get ruined due to negligence."

"The female and male lines will have to be watched and fostered for equal and timely growth by adjusting water, fertilisers, etc. from time to time so that the flowering time will be watched to produce seed. The senior agronomist and the officers of the department knowing hybrid cultivation should keep on visiting the farms constantly and give instructions to the field staff to watch and foster the growth so that proper seed production is achieved without any nicking."

"About 40 seed processing machines will be required. We will have to earmark godown capacity for storing the hybrid seed in proper conditions so that there is neither excessive heat nor humidity and no wastages. These will have to be located all over the State so that we do not have to carry the produce over long distances."

"Government have approved the appointment of a State Hybrid Specialist and Dr. Sawant has been asked to join immediately. He would assist you in chalking out and supervising the entire programme".

The letter ended with the following : "I hope the Superintending Agricultural Officers and the *Parishad* Agricultural Development Officers are fully in touch with the total programme that we are working out, as otherwise the

programme may not be given proper precautions in all the districts and to that extent, its efficiency may suffer." A copy of the letter was endorsed therefore to these officers for their information.

A constant problem in the implementation was deviation from the technical standards of crop planting. In his letter of February 23, 1966 to the Additional Director of Agriculture, the Senior Agricultural Inspector of NSC pointed out, "The progress of planting is extremely slow. The *Zilla Parishad* Officers are following their own means and methods in planting and no care is being taken to avoid mixing of male and female seeds. They are not at all following the technical advice of our staff posted to help the *Parishad* people in technical matters. Since this is a new sort of enterprise for those people, it is necessary that they follow our guidance in planting and other operations so that they may not come across any undesirable consequences afterwards." Dr. Vaidya immediately wrote to the *Parishad* Agricultural Development Officer, *Zilla Parishad*, Poona, and requested him to see that planting of female and male plants were done according to the approved plan.

REVIEW AND FURTHER STEPS TAKEN FOR IMPLEMENTATION

The programme was reviewed at a meeting under the chairmanship of Dr. Shaikh, on February 25, 1966. It was found that the maximum areas that would be covered both in private as well as state sectors by February 28 would be :

2598 acres under jowar
2340 acres under maize
643 acres under bajra
Total : 5581 acres.

At this meeting, the question of production of foundation seed during 1966-67 season for coverage under seed crops during 1967-68 season to meet the hybrid seed requirements during 1968-69 was also discussed.

The Secretary was to discuss the programme with a Team of Experts from the Government of India and NSC. For this purpose, the Additional Director with the assistance of Dr. Sawant was asked to prepare a note on the programme. The note mentioned the acreage covered up to February 28, 1966.

According to the note eight seed processing plants were being erected each at a cost of about Rs. 1 lakh in building and machinery. The plants were to be completed before September. Necessary staff consisting of one Foreman Supervisor, one Mechanic, one Attendant and one Storekeeper, was to be posted at each plant.

Six officers were trained at the seed processing and production course organised by NSC between December 15, 1965 and February 14, 1966. 40 to 50 officers would be trained by them. Each district would have a nucleus of two trained officers. These officers in turn could arrange training at district level for subordinate staff.

To implement the programme of production of hybrid seed successfully and efficiently, the note suggested that it would be necessary to provide technical staff at the state and district level on the following pattern:

TABLE 6

State	District
One Hybrid Seed Production Officer (Class I)	One Class II Officer for every 1000 acres
Two Hybrid Seed Production Officers (Class II)	One Agricultural Officer for every 500 acres
Two Technical Assistants in I Grade	One Agricultural Assistant for every 100 acres
Ministerial staff	Ministerial staff

As a policy measure, the note also suggested that in order to streamline production, it would be desirable that all hybrid seed production was done under the supervision of the state locally, rather than through private seed growers affiliated to NSC, over whom the State Government had no control either in regard to the processing policy or distribution programme.

As regards the programme for 1966-67, the note suggested that in order to cover 65 lakh acres under hybrid seeds during 1967-68, it would be necessary to put 65,000 acres under hybrid seed production in the year 1966-67. This would consist of 40,000 acres under sorghum, 17,000 acres under maize, 8,000 acres under bajra. Half of this would be in *kharif* 1966-67 season and of the remaining 50 per cent, about 35 per cent in *rabi* season and 15 per cent in summer season. NSC, the note

pointed out, would have to make arrangements for supply of foundation seed for the acreage mentioned above.

A circular letter of March 1966 issued on behalf of the Director of Agriculture to all the *Zilla Parishad* Officers, Superintending Agricultural Officers, Divisional Soil Conservation Officers and other Departmental Officers gave instructions about the after-care of the seed sown. The circular said: "The sowing of the hybrid seed production fields has been completed by the February 28, 1966. Though sowing has been delayed in some cases "operation planting" has on the whole been completed quite satisfactorily. However, the "operation after care" of the sown crops is not only as important but more crucial than the planting itself. It would, therefore, be essential to take all possible after care of the crop to bring it to successful maturity. The staff entrusted with this work should, therefore, pay very frequent and regular visits to the seed production plots and see that the flowering operations are done regularly and in time. The staff should be on constant move to implement the operations.

(1) *Plant protection measures* : In the case of lower crop, the staff should watch out for the attack of the beetle, stem borer and shoot flea. Endrin spraying, as per given schedule, should be given to control these pests. In the case of the attack of Army worms in maize, the dusting of the crop with 10 per cent B.H.C. dust should be given to control and eradicate the pest.

(2) *Fertilizers* : The second dose of fertilisers consisting of 20-25 kg. of N_2 would be due to be applied to these crops when they are 30 to 35 days old. This dose may be applied in between the rows of the plants in time so that the crop continues to make good growth. Fertilizer should be properly mixed with the soil and irrigation should be given immediately afterwards.

(3) It would be necessary to see that the crops are irrigated regularly at an interval of 10 days so that the growth does not suffer for want of moisture in the soil. Wherever necessary, the district officer of the Irrigation and Power Department should be approached to give timely water for irrigating the crops. In case of any difficulties, the department should be approached

with definite proposals. The period following soon after the heading would be critical from the point of view of pollination and subsequent fertilization. Frequent light irrigation would keep the temperature down and will create the necessary humid condition in the earhead zone of the crop and would help proper pollination and fertilisation.

(4) It would be necessary to keep a close watch on the relative growth of both the parents. It has been observed that the male parent in case of jowar crop is late in heading. If the growth of male parent is lagging behind, then a dose of 10 lb. of N_2 per acre in the form of urea followed by irrigation of male only should be given when the crop is about 40 days old. This will accelerate the growth of male parent rows and keep in proper nicking of the parents.

(5) In the case of maize crop, the first tassel would be seen when the crop is about 40-45 days old. Detasseling of seed parent rows should be done very scrupulously as per instructions. Detasseling has to be done every day in every field till the last tassel from seed parent rows is removed. It should be noted that NSC insists on a very high standard of detasseling. More than 10 per cent shedding tassel in any one inspection and more than 2 per cent shedding tassel in all the inspections may lead to the rejection of the crop and hence very careful attention should be given to this aspect of the crop. Each and every field would have to be visited to see that proper detasseling has been carried out. Holidays and Sundays should not be allowed to interfere with detasseling work.

(6) In the case of jowar and bajra, roguing of all types should be done before flowering, from both male and female parent rows. At flowering, roguing should be done to remove pollen shedding types in seed rows. The help of the staff of NSC appointed in each district should be taken in all such operations.

MASTER PLAN FOR 1966-67

The Master Plan for Hybrid seed production for the year

1966-67 was issued by the Director of Agriculture to all the Chief Executive Officers of *Zilla Parishads* in his letter dated February 19, 1966. The following are some of the excerpts from that letter.

"In order to step up food production, Agriculture Department concentrated its attention on cultivation of hybrid maize in the summer compaign of 1965-66. With the encouraging response obtained from cultivators as well as performance of hybrid jowar, bajra and maize in the demonstration plots, it has been decided to expand this programme substantially during 1966-67. A programme of hybrid seed production has already been undertaken during the summer of 1965-66. This will provide sufficient commercial hybrid seed to cover about 15 lakhs acres—6 lakh acres under maize, 8 lakh acres under jowar and 1 lakh acres under bajra, during 1966-67.

"The programme for 1967-68 is 50 lakh acres—12 lakh acres maize, 30 lakh acres jowar and 8 lakh acres bajra and for this, it would be necessary to put 50,000 acres under production of hybrid seed during 1966-67. This area will have to be divided into 20 districts which exclude Konkan districts of Thana, Kolaba and Ratnagiri as also Chanda and Bhandara which are mainly rice-growing tracts. Any small requirements of hybrid seeds in these districts can be met from the neighbouring districts. Each district will therefore have to undertake hybrid seed production programme of about 2500 acres. Since two crops of hybrid jowar, bajra and maize can be raised in a year on the same land, it would be necessary to have at least 1250 acres under irrigation in each district for production of hybrid seed. This area should come from 3 to 4 villages, as far as possible in a compact block; so that proper isolation can be ensured and processing plants set up to process the seed.

"From the experience obtained during 1965-66 season, it is observed that a number of progressive cultivators owning land either under lift irrigation or canal irrigation, the *Sahakari Sakhar Karkhanas* as well as cooperative life irrigation societies are keen to register themselves as hybrid seed producers. You are, therefore, requested to prepare a list of such progressive cultivators or cooperative societies and see what compact size blocks they are willing to assign for hybrid seed production and further ascertain whether:

(1) they are willing to register themselves as hybrid seed producers with NSC.
(2) they agree to work under the general supervision of the Agriculture Department and NSC.
(3) they agree to receive guidance and permit inspection by the technical officers of the Agriculture Department as well as NSC.
(4) they agree to get their produce processed at the processing units set up by the Agriculture Department and sell the same to cultivators as seed at the rates approved by the Agriculture Department and NSC.

If these lists are sent to this Department by the end of March 1966, it would be possible to scan through the same, undertake spot inspection and finally approve the registered producers and complete other formalities by way of registration with NSC filling in the agreement forms, etc.

"It may be mentioned here that hybrid seed production, is not only a technical job but also a costly one, involving high expenditure on seed, fertilizers, pesticides, plant protection, etc. Lift irrigation from a well or river is much more costly than flow irrigation from canal. It would, therefore, be advisable to give preference to such producers who receive canal irrigation in all the seasons. A whole village in the command of irrigation project can take up this work provided all cultivators in the village join the programme. We will then call it a 'hybrid seed village' and extend all necessary facilities by way of supplies, technical guidance and supervision. The Irrigation and Power Department will also be approached to supply assured water whenever required.

"A processing plant costs about Rs. 1.00 lakh (Rs. 75,000 for buildings plus Rs. 25,000 for machinery). The capacity of a processing plant is about 500 to 750 acres. Since the produce is harvested at the ripe stage and not the bone-dry stage of the corn or grain, it is very necessary to dry the produce in the drying bins, grade it, apply pesticides and then bag and label it in the processing plant. This is a must. As such, 750 acres which will feed the processing plant should be preferably within a radius of 3 miles. If we locate areas at farther distances, then it would mean extra heavy cost on transport which might have to be borne by the cultivator himself. From this point of view also

the idea of "seed village" or a cooperative lift irrigation society or *Sahakari Sakhar Karkhana* giving about 500 to 750 acres of land in a compact area is desirable.

"In order to process the seed from 2500 acres available in three seasons, it would be necessary to set up two processing plants in each district and the total requirement of processing units will be 40. From this point of view also the need of having 'seed villages' with a compact area of 500 to 750 acres is obvious.

"The cost of cultivation of hybrid seed is rather high and ranges from Rs. 400 to 500 per acre in case of jowar, bajra and maize. Naturally, only such cultivators or group of cultivators who can afford to incur such heavy expenditure of Rs. 500 per acre or are capable of getting crop loans should be given preference. Others can go in for commercial hybrid crop production.

"The area of 2500 acres on which hybrid seed programme will be undertaken may roughly be divided into 1250 acres in *kharif*, 900 acres in *rabi* and 350 acres in summer season. This is a tentative distribution and there is no hard and fast rule about it. One may alter the proportion, keeping in view the availability of irrigation water, cost of lifting water and any other convenience.

"The requirements of fertilisers for 2500 acres under hybrid seed production programme will be 625 tons of ammonium sulphate, 415 tons of superphosphate and 76 tons of sulphate of potash; pesticides needed will be 930 tons of 10 per cent HHC and 15 tons of Endrin 20 per cent. These will be procured and supplied. Arrangements may be made to stock these in your district preferably in godowns belonging to cooperative societies or any other agency. You may also have to watch that these are used exclusively for hybrid seed production.

"It may be necessary to stock the produce of hybrid seed in pucca godowns. The produce of 2500 acres at the end of *kharif* season will be 625 tons or 1.25 lakh bags of 5 kg. each and at the end of *rabi* season will be 450 tons or 90,000 bags of 5 kg. each. These will have to be kept in store for at least 3 or 4 months. Suitable godowns belonging either to the Agriculture Department or *Zilla Parishad* or cooperative societies or Warehousing Corporation in the vicinity of the processing

(1) they are willing to register themselves as hybrid seed producers with NSC.

(2) they agree to work under the general supervision of the Agriculture Department and NSC.

(3) they agree to receive guidance and permit inspection by the technical officers of the Agriculture Department as well as NSC.

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the idea of "seed village" or a cooperative lift irrigation society or *Sahakari Sakhar Karkhana* giving about 500 to 750 acres of land in a compact area is desirable.

"In order to process the seed from 2500 acres available in three seasons, it would be necessary to set up two processing plants in each district and the total requirement of processing units will be 40. From this point of view also the need of having 'seed villages' with a compact area of 500 to 750 acres is obvious.

"The cost of cultivation of hybrid seed is rather high and ranges from Rs. 400 to 500 per acre in case of jowar, bajra and maize. Naturally, only such cultivators or group of cultivators who can afford to incur such heavy expenditure of Rs. 500 per acre or are capable of getting crop loans should be given preference. Others can go in for commercial hybrid crop production.

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"It may be necessary to stock the produce of hybrid seed in pucca godowns. The produce of 2500 acres at the end of *kharif* season will be 625 tons or 1.25 lakh bags of 5 kg. each and at the end of *rabi* season will be 450 tons or 90,000 bags of 5 kg. each. These will have to be kept in store for at least 3 or 4 months. Suitable godowns belonging either to the Agriculture Department or *Zilla Parishad* or cooperative societies or Warehousing Corporation in the vicinity of the processing

plants which can store at a time at least half the quantity mentioned above, may please be located and reserved in time.

"It may not be necessary to provide crop loans for all the 2500 acres. If crop loans are provided say for 1000 acres in each district at the rate of Rs. 400 per acre, the amount required will be Rs. 4 lakhs. This can be paid back and reutilised for raising a second crop either in *rabi* or summer season in the remaining area. You may contact the central cooperative banks and in consultation with the District Deputy Registrar see that such crop loans will become available to hybrid seed growers."

The letter ended with a request to the *Zilla Parishad* Officers to give priority to this programme and communicate names of progressive cultivators, seed villages, cooperative lift irrigation societies, *sakhar karkhanas*, etc., by the middle of March 1966. They were also requested to indicate names of the towns where processing plants would be set up, giving details about availability of electricity, water-supply, labour and other facilities.

A letter from the Secretary, Agriculture and Cooperation Department of the State Government dated March 5, 1966 addressed to all Superintending Agricultural Officers and *Parishad* Agricultural Development Officers with copies marked to the Director of Agriculture and Additional Director of Agriculture stressed the special importance of the high-yielding varieties programme as part of the intensive cultivation programme during the year 1966-67. The letter said, "The programme of hybrid seed cultivation for the next year will be of the order of over 45,000 acres under sorghum, 20,000 to 25,000 acres of maize and 5000 acres of bajra during the *kharif*, *rabi* and summer seasons. This quantity of parent seed has got to be produced next year and every district should have a programme of its own and as much protected irrigation works as possible should be utilised in order to locate this acreage according to suitability and isolation desirable for production of hybrid parent seed. Superintending Agricultural Officers may please discuss this in detail with their *Parishad* Agricultural Development Officers and take further instructions from the Additional Director of Agriculture and the Hybrid Seed Specialist, Dr. Sawant, at Bombay, and the necessary programme of selection of areas, posting and training of special and general staff, stocking of necessary quantities of seeds, fertilisers, insecticides, etc. may be

undertaken forthwith." The letter drew attention to the role of the *taluka* seed farms in this connection. "Though we have opened practically all the *taluka* seed farms, some of the seed farms are not functioning well and are not utilising all the lands on these farms. The farms have not yet been fenced and the well and other irrigation potentials have not been fully utilised. Modern implements given to these farms are not being utilised. Government are anxious that these seed farms should be utilised to the maximum extent by taking 2 or 3 crops of improved varieties of seed and hybrid seed."

TRAINING OF OFFICERS

In a letter issued in March 1966 to all the Chief Executive Officers, the programme of training for officers in the technique of hybrid seed production was outlined. The letter said, "The Department of Agriculture is undertaking a large programme of hybrid seed production in the year 1966-67 and hence it is necessary to train a large number of officers and assistants in the technique of hybrid seed production so that the programme can be implemented successfully. In pursuance of this policy, it has been decided to hold state level, divisional level and district level training courses in the techniques of hybrid seed production in the month of April, 1966. The programme of training is

April 4—6 1966	State level
April 11—13, 1966	Divisional level
April 18—27, 1966	District level

The State level training course would be organised at the Gram Sevak Training Centre at Manjri. The Officer on Special Duty, Hybrid Seed Production and Research would be in overall charge of the State level training camp. The Superintending Agricultural Officers in the *Parishad* Agricultural Development Officers would fix up the venue of the divisional level and district level training camps, which would be organised with the help of the officers trained at the state level camp.

COMMENTS OF THE IRRIGATION DEPARTMENT ON THE PLAN

The Master Plan for 1966-67 did not, however, appear to have been issued with the prior concurrence of the Department of Irrigation. The Irrigation and Power Department in their letter dated April 18, 1966 wrote to the Additional Director of

Agriculture, Maharashtra State giving their comments on the Master Plan for hybrid seed productions as follows. "While implementing the programme of hybrid seed during the current hot weather season, it has been observed that the areas for hybrid maize and jowar have been chosen further away from the irrigation systems, which has resulted in great strain in supply of water from irrigation systems. It is, therefore, requested that all such areas should be closer to the canal works, preferably at head reach and within perennial sections. Areas should be selected after prior consultation with the Irrigation and Power Department, so that it will be possible for this Department to assure availability of water well in time." The Under Secretary in the Irrigation Department requested the Additional Director of Agriculture, "to communicate to his Department and to the Executive Engineers/ Superintending Engineers concerned the irrigable areas and names of the irrigators to whom water was be supplied for hybrid seed, by the following dates:

(*i*) *Kharif* season 1966	...April 1966
(*ii*) *Rabi* season 1966	...September 1966
(*iii*) Hot weather season 1967	

The letter warned "that the rotation period for supply of water to hybrid seed cultivation will be allowed at 10-14 days interval as allowed for heavy crop like sugarcane and it is not possible for this Department to change the above rotation programme from crop to crop merely because the irrigators demand and the District Agricultural Officers support the demand without convincing reasons and without considering the practical difficulties of the Irrigation and Power Department". In order to obviate any difficulty, the letter requested the Director to issue suitable instructions to the Chief Executive Officers and concerned Agricultural Officers to have prior consultation with the Executive Engineers concerned regarding the availability of water, well in advance, before the cultivation of hybrid seed every year.

Seed Production Officers, Agricultural Officers and Agricultural Assistants in different districts in charge of this programme joined by about February, 1966.

REPORTS FROM THE DISTRICTS

On the basis of the instructions issued by the Director of

Agriculture, action was taken by field officers including different Chief Executive Officers and the office of the Director started receiving carbon copies of instructions given by different district officers.

There was for instance a D.O. letter dated March 14, 1966 from the Chief Executive Officer, Nasik, to the *Parishad* Agricultural Development Officer, *Zilla Parishad*, Nasik, inviting his attention to this important subject and requesting him to give personal attention to this matter. This letter also said "from the experience of the last two months, we have learnt a lesson of difficulties which come up due to lack of advance planning. I would, therefore, like you to attend to this reference personally, get in touch with all the officials and non-officials, prepare a detailed and exhaustive note on various points mentioned in the circular of the Additional Director and discuss the note with me, within 10 days positively. After getting all the first-hand information and preparing a self-contained report, I would like to discuss the matter with the office-bearers and concerned officers who will be involved in making this programme a success ."

The *Zilla Parishad* Officer, Amravati pointed out that the cultivators intending to take hybrid seed production programme were contacted and, on the basis of the relevant information, he felt that it was possible in Amravati district to have the intended coverage of 2500 acres. Though the land proposed by him was unirrigated, it was approved because it was under assured rain-fall. He also mentioned that the *Parishad* Agriculture Development Officer had contacted the District Cooperative Bank for short-term finance. Amongst the difficulties mentioned was short supply of fertilizers . If the sale and purchase societies were supplied with fertilizers, they could make arrangements for stocking and sale. He sent the information of hybrid seed production programme in his district for 1966-67 in the prescribed form.

The *Parishad* Agricultural Development Officer, *Zilla Parishad*, Jalgaon, pointed out that the cultivators wanted guarantee from the Agriculture Department and NSC regarding the minimum price of the seed.

The Satara *Zilla Parishad* Officer in his letter of March 29, 1966 sent a statement of allocation of 1250 acres as between different blocks and said the village-wise and crop-wise information, split up of targets, list of cultivators, etc. had been called

for from the Block Development Officers concerned.

On March 18, 1966 the *Parishad* Agricultural Development Officer, Satara , *Zilla Parishad* was pressing the Block Development Officers to send the requisite information on the basis of the decisions taken at the meeting of Agricultural Officers and Extension Officers, held on March 16-17, 1966 at Satara. The Satara *Zilla Parishad* tried to find out from the Divisional Soil Conservation Officer, the area that could be spared by the *Taluka* Seed Farms for hybrid seed production during *kharif* 1966. He wrote urgent D.O. letters on April 9, 1966 to all the Block Development Officers asking them "to look into the matter personally and to arrange to send the required information immediately as desired by the Department" and marked a copy of this letter to the Director of Agriculture.

The Superintending Agricultural Officer, Nagpur Division, Nagpur, in his letter of April 14, 1966 to all the Chief Executive Officers requested them to ask the *Parishad* Agriculture Development Officers to finalise the planning of selected areas for hybrid seed production. The Agricultural Development Officer, *Zilla Parishad*, Nagpur, in his letter of April 28, 1966, pointed out that the matter was discussed in the *Panchayat Samiti* meetings of the Block Development Officers, Agricultural Officers and Agricultural Extension Officers where the whole scheme was carefully studied on the basis of which two conclusions were arrived at, *viz.,*

(1) The seed production programme is rather difficult on such a large scale to begin with and he, therefore, requested for the reduction of the target to 500 acres for *kharif* and 250 acres for *rabi* which appeared to be feasible.

(2) He also felt that compact areas of 500 to 750 acres could not be obtained. He was careful to point out that this conclusion was based on survey and discussions.

The Superintending Agricultural Officer, Aurangabad, in his letter of March 17, 1966 to the Director of Agriculture, gave information about allocation regarding hybrid seed programme in different districts in his division.

The Agricultural Officer of the *Zilla Parishad*, Aurangabad, in his letter of March 29, 1966 referred to the decision at the Divisional Extension Conference held on March 10-12,

at Aurangabad in which a district-wise programme was fixed. The letter, however, did not indicate village-wise information.

The *Parishad* Agricultural Development Officer, *Zilla Parishad*, Sangli, in his letter of April 4, 1966 to the Additional Director of Agriculture, indicated that he had discussed with the Chief Executive Officer, *Zilla Parishad*, Sangli, and Chairman, *Shetakari Sahakari Sakhar Karkhana Ltd.*, Sangli, on the basis of which the programme was worked out covering the area assigned to the district. He also indicated that orders had been placed for equipment for two processing plants, standard size bags for hybrid seeds had been prepared and material known as "Captan" for seed treatment had been obtained. He was, however, uncertain about the source of the seed and elicited information on the subject.

The *Parishad* Agricultural Development Officer, *Zilla Parishad*, Bhir, wrote on April 20, 1966 directly to the Secretary to the Government of Maharashtra, Agriculture and Community Development enclosing a break-up of the blockwise targets.

The *Parishad* Agricultural Development Officer, *Zilla Parishad*, Poona, proposed 400 acres seed production block at Bhavarapur *Taluka* Haveli and 200 acres in a compact area of three to four villages in Baramati. He, however, felt that sowing jowar seed in February was very late and was likely to be affected by flea beetles. He, therefore, sought information regarding the suitable season for sowing.

On April 27, 1966, Chief Executive Officer, *Zilla Parishad*, Dhulia, wrote to the Block Development Officers and Assistant Block Development Officers enclosing *talukawise* and crop-wise break-up of the allotted targets for hybrid seed production (foundation). He pointed out that the programme had been organised from the district level in view of urgency and convenience and asked the Block Development Officers to put up the programme before the *Panchayat Samitis* for information. The Bank authorities had been asked to sanction crop finance upto Rs. 400/- per acre well in time to achieve the full targets. The letter asked the Block Development Officers to send the selection of cultivators in groups with maps and supporting information to his office immediately. It also asked for adequate arrangements for storage of seeds, manures and pesticides.

One of the points of coordination at the level of

implementation in the district was the need to keep the Executive Engineer appraised of the dimensions of the programme within the district. A letter from the Chief Executive Officer, *Zilla Parishad*, Dhulia, to the Executive Engineer of Dhulia is an example of this. It says, "The success of the programme entirely depends upon the cooperation of your department in extending the irrigation facilities, so much so that even the defaulters who are included in this programme will not be deprived of these facilities. A complete list of cultivators along with the map will be received by you shortly through the Block Development Officer, Dhulia."

ADVICE OF AN INSTITUTE OF RESEARCH

While this was the official planning and implementation of the programme, an institute of study and research also started taking some interest in the programme. Shri K. G. Joshi of the Institute of Regional Development Planning, Kadawadi, Wardha, wrote to Shri Vaidya as follows :

"I find that in spite of training of the campaign officer, there is no clarity of thinking on the part of the *Zilla Parishad* Officers with respect to the hybrid seed. He made the following suggestions regarding the implementation of the programme.

"(*i*) As far as possible hybrid seed production should not be taken up under unirrigated conditions; the area should be irrigated either by canals or by lift irrigation from wells or rivers.

(*ii*) Crops to be grown for hybrid seed production of jowar and bajra should invaribly be grown as off-season crops.

(*iii*) Hybrid maize could be taken up during the main growing season; maize not being a common crop, there would be no difficulty in isolating the seed production area by 200—300 meters from other maize areas and detasseling the crop within the isolation limits.

(*iv*) For hybrid seed production of bajra, there would be no difficulty of isolation even if this crop is grown in the *kharif* season from June to October in the Vidharbha region, to some extent in Parbhani and Nanded districts of Aurangabad division and Jalgaon district of Bombay division but in Poona, Ahmednagar, Satara, Sholapur,

Nasik and Dhulia districts, it would be difficult to isolate this crop by 200—300 meters from other bajra fields. In this region, instead of growing this crop in the *kharif* season, it would be better to sow this crop between August 15 and September 15, so that flowering of this crop does not clash with the normal *kharif* crop and the question of isolating this off-season crop from the main crop does not arise. Since both parents of hybrid bajra are very amenable to ratooning, a second crop from November to February would also be possible.

(*v*) In the Vidarbha region, jowar hybrid seed production should not be attempted in the normal *kharif* season. Thus on the whole it would be more feasible to grow the crop in the off-season than making efforts in isolating the crop by growing it in the normal season.

(*vi*) The area under hybrid seed production should start with a green manuring crop of sunnhemp which should be sown with the rains in June or July and ploughed in by about August end. Bajra crop could be sown from August 20 to September 15. This crop would be ready for harvest by end of November or first week of December. It would be ratooned thereafter and the second crop taken by the end of March. As far as jowar is concerned, green manuring would be completed by August 15, and the area would be sown from September 20 to October 5. This crop would be over by the end of December or the first week of January and it would be ratooned and the second crop would be taken by the end of April. The advantage would be that from the same area under hybrid seed production of jowar and bajra, two crops could be taken every year."

The letter concluded by saying that the thinking at the district level at present was very confused and it would be very difficult for *Parishad* Agricultural Development Officers to handle the programme of hybrid seed production on an area of 2000 to 3000 acres, unless they had clear ideas.

In pursuance of this letter, further instructions were issued by the Director of Agriculture to the Chief Executive Officers of *Zilla Parishads* in May 1966. The main points in this

letter were :

(*i*) the area selected should be in compact blocks;

(*ii*) the programme was to be undertaken under irrigated conditions either under canals, lift irrigation or wells. Areas under canals must be close to the head works, preferably within 5 to 7 miles;

(*iii*) areas should be selected for hybrid seed production in consultation with the officers of the Irrigation and Power Department. They should be informed about the requirements of water for hybrid seed under different seasons by the following dates :

Kharif season	... May 1966
Rabi season, 1966 Hot season, 1967	... September, 1966

(*iv*) Full information regarding the areas selected, the survey numbers, the names of cultivators, villages, location, date of sowing, etc., should be given to the local seed production assistant of NSC and to the Senior Agricultural Inspector of NSC as also the Department.

(*v*) A register of certified growers should be maintained. The letter also embodied the suggestions made by the Wardha Institute regarding the season for maize, bajra and jowar so that there would be no clash between these crops and the normal season (*kharif*) crops. This would facilitate isolation.

Apart from the precaution to ensure that the flowering of seed crop did not clash with the flowering of the normal crop, the letter also mentioned that precaution should be taken to ensure that the rainy season was avoided in the growth of the seed crop. The time of sowing would have to be adjusted accordingly.

ARRANGEMENTS FOR THE SUPPLY OF SEED

As regards the arrangements for the supply of seed, the letter said, "Arrangements for obtaining foundation seed of parents maize, jowar and bajra from NSC are being finalised. As soon as the seed is available, a telegram would be sent to you. On receipt of the telegram from the Department, the Agricultural Officer or any other responsible officer should be sent post-haste to Poona for collection and transport of the seed to the respective

places. The seed that would be supplied would be for the requirement of all types of seed growers, Agriculture Research Stations, *Taluka* Seed Farms, Trial-cum-demonstration farms, certified seed-growers registered with NSC and for the areas selected by the *Zilla Parishads*. On receipt of the seed at your end, full requirements of these categories should be met from the allotment made to you." The letter contained the proforma to be filled by farmers interested in the production of certified seed.

A record of the meeting held at Poona on May 4, 1966 attended by Dr. Shaikh, Dr. Vaidya, Dr. S. C. Sawant, Officer on Special Duty and other local officers of NSC contained the following points regarding arrangement for the supply of seed :

(1) It was agreed that the foundation seed would be made available to the Maharashtra Government by NSC for multiplication during *kharif* 1966 as follows :

Sorghum	:	28,000 acres
Bajra	:	6,000 acres
Maize	:	8,000 acres

Maharashtra Government was very keen to have all the foundation seed as early as possible and in any case not later than 3rd week of June 1966. 50 tonnes of MSCK 60 were being imported mostly for Maharashtra Government, although it was doubtful whether the seed would reach Bombay before June 20. A telegram was sent to the Ministry of Supply at the request of Dr. Shaikh asking them to despatch the seed by direct sailing passenger boat to Bombay so that the seed could reach Bombay, if possible, by June 15, 1966. Dr. Shaikh indicated that, if necessary, Maharashtra Government would be prepared to bear the air-lifting charges, if the arrival by sea was likely to be delayed. It was, however, agreed that Maharashtra would be supplied foundation seed for 15,000 acres from local production; the rest would depend on the arrival of seed from abroad.

(2) Dr. Shaikh was emphatically of the view, that under no circumstances, NSC should contact directly the seed producers in Maharashtra and if they did, the Maharashtra Government might not be in a position to supply the necessary inputs for the seed multiplication programme of such producers. Their experience with the existing seed producers/growers which NSC had in Maharashtra was not very happy. Most of them

were acting as middlemen and were exploiting poor cultivators from whom they were purchasing unprocessed seed at very cheap rates, processing it in the plants and selling it at exorbitant prices. Such an arrangement would create serious difficulties. Maharashtra Government, however, had no objection to the NSC forwarding any requests received by them to the Maharashtra Government and they would be willing to enter into contract, on the same basis, with that of other cultivators. The seed multiplication programme was earmarked as follows :

20,000 acres with the farming corporation in large blocks, 3000 acres in *taluka* seed farms, additional 3,550 acres at *taluka* irrigation farm and 2,500 acres in each of the 20 districts chosen by them. Compact and large blocks as far as possible would be selected so that concentrated technical supervision could be provided by the State Government as well as NSC. While the State Farming Corporation and the *taluka* seed farms had the necessary technical staff, one Hybrid Seed Officer one Agricultural Supervisory Officer and four Agricultural Assistants will be in charge of the high-yielding seed multiplication programme.

Meanwhile, confusion arose regarding the seed growers selected by the Department and those who directly approached NSC. The confusion is reflected in the following letter of May 23, 1966 from Shri Y. R. Mehta, General Manager of NSC to Dr. Vaidya : "In the *kharif* season, you have planned to raise 6,000 acres under seed production of hybrid maize, 15,000 acres under hybrid jowar and 4,000 acres under hybrid bajra. We have received applications from private people for 1803 acres for maize, 2215 acres for jowar and 655 acres for bajra. I have also learnt that your list also includes some private people who have also approached us for supply of foundation seeds. This is causing a lot of confusion. I shall, therefore, be obliged if you could kindly indicate immediately whether the total acreage to be put under seed production in *kharif* season for maize, jowar and bajra respectively under your programme includes those of the private farms and if so, kindly indicate the parties included in your list." In reply, Dr. Vaidya pointed out that the planting programme for production of hybrid seeds during *kharif* 1966 had since been revised and it was planned to raise 28,000 acres under seed production of hybrid sorghum,

8,000 acres under hybrid bajra. This programme was discussed with Government of India Team on high-yielding varieties programme at Bombay, on March 27, 1966 and in subsequent discussions with the Dy. Commissioner (seeds) of the Union Ministry on May 4, 1966. It was then agreed that NSC would supply full requirements of foundation seed for planting the acreage planned under hybrid maize and bajra seed production while in the case of sorghum, foundation seed for 15,000 acres would be supplied by NSC from local production and for 13,000 acres from the seed which is being imported from U.S.A. He, therefore, requested NSC immediately to issue release order to NSC unit at Poona to supply this quantity of seed to them.

As regards the supply of foundation seed to certified seed growers already registered with NSC, the Director pointed out, "Maharashtra Government has no objection if the foundation seed is supplied directly to them by NSC according to their planned requirements in view of your desire to keep liaison with these growers, who made pioneering efforts in hybrid seed production. It would, however, be desirable that NSC does not register any new seed grower, except those who are already registered with it before March 31, 1965. Any fresh applications for registration may be forwarded to the State Department of Agriculture. NSC would also keep this Department fully posted with the acreage planted and quantity of seed supplied to these growers in various seasons. It is not clear whether the demand mentioned in your letter is from old registered seed growers only or it also includes the demand of new applicants. It would be better if NSC supplies seeds directly to the old certified growers and forwards new applications to this department for their resigtration as seed growers. They would be supplied seed by the Agriculture Department. Arrangements have been made for the supply of necessary inputs such as fertilizers, irrigation, pesticides and finance to the hybrid seed producers registered with the Agriculture Department." The letter enclosed a list of certified seed growers whose requirements had been included in the Department's planned programme for *kharif* 1966 and requested for the supply of foundation seed as mentioned. The letter concluded once again by stressing that for proper coordination of work of hybrid seed production, it would be desirable that the supply of seed was channelled through the State Department

of Agriculture which would guarantee supply of foundation seed to the seed growers of NSC.

On June 1, 1966, Dr. Y. R. Mehta, General Manager of NSC wrote to the Director of Agriculture giving revised targets regarding seed production programme which were indicated as follows :

TABLE 7

Crop	Total Quantity of seed required (in quintals)	Seed yield per acre (in quintals)	Seed production area required (acres)
Maize	31,250	6	13,550
Jowar (Sorghum)	84,400	3	28,140
Bajra	12,000	3	4,000

The figures regarding total quantity of seed required were based on the targets of areas to be covered by improved seeds for the *rabi*-summer 66-67 and *kharif* 67. The letter pointed out that as the foundation seed stock was limited, the following production acreage for the *kharif* season was allocated :

TABLE 8

Crop	Seed production acreage allocated	Foundation Seed allocated	
		Female	Male
Maize	6,000	90,000 TVK	30,000 TVK
Jowar (sorghum)	23,000	69,000 Kg.	46,000 Kg.
Bajra	3,500	3,500 Kg.	1,750 Kg.

The balance will have to be produced in *rabi* and summer seasons. As regards the arrangements for the supply of seed, the letter pointed out that NSC would be responsible for supply of foundation seeds and also for the certification of the seed produced. The letter said, "We would be supplying foundation seed as soon as your firm commitment and despatch instructions are received. The seed could be received at regional locations and then distributed from these places among seed growers of that region. Please give your despatch instructions at the earliest because the foundation seed is to be despatched from various production centres. It will take some time to arrange

for supply."

For facilitating certification work, the letter informed that a certification centre had been opened at Poona. As regards the financial arrangements, the letter said, "It is the policy of NSC to recover the cost of foundation seed as also the inspection fee in advance. For the seed production acreage allocated to you, the charges on account of these are indicated in the Table below :

TABLE 9

Crop	Cost of foundation seed per acre (Rs.)	Inspection fee per acre (Rs.)	Cost per acre (Rs.)	Seed Production acreage planned	Total cost (Rs.)
Maize	80/-	25/-	105/-	6,000	630,000
Sorghum	40/-	25/-	65/-	23,000	1495,000
Bajra	18/-	25/-	43/-	3,500	150,500
				Rs.	22,75,500

A request was made for remission of this amount to the Corporation.

As regards the applications from farmers directly received by the Corporation, the letter said that all these applications would be forwarded to the Director. The letter concluded by requesting early action to be taken, since sowing time was fast approaching.

In reply to this letter, Dr. Vaidya pointed out that the hybrid seed production programme during *kharif* 1966 and the seed requirements would be as given in the Table below :

TABLE 10

	Area in acres	Seed requirement	
		Female parent	Male parent
Sorghum	28000	84000 Kg.	56000 Kg.
Bajra	6000	6000 Kg.	3000 Kg.
Maize	8000	120000 T.V.K.	40000 T.V.K.

The letter requested for the immediate release order for the supply of foundation seeds. As regards payment of advance, the Additional Director pointed out the difficulties under the treasury rules which required that further advances could not

be drawn in the absence of accounts for previous advances. He, therefore, requested NSC to send a bill of cost of the quantity of seed at the rates given by them, in advance, to enable him to arrange for its payment. As regards the supply of foundation seed to the farmers directly approaching NSC, the Additional Director said that NSC should ask the farmers to contact Agricultural Development Officers of the *Zilla Parishads* and also send a list of these farmers.

DIFFICULTIES IN IMPLEMENTATION

Some difficulties were experienced in the implementation of the programme. These were discussed by the Additional Director with Shri Veeraraghavan of NSC. These were :

(*i*) The seed processing assistants of NSC, required to be present at the time of harvesting, were not readily available, as a result of which harvesting was delayed, exposing the crop to damage by birds and/or rains. It was, therefore, agreed that *Parishad* Agricultural Development Officers would be allowed to harvest these crops in the presence of either the Hybrid Seed Production Officer or Lecturers in Botany of the Agricultural colleges, or gazetted assistants of the office of the Millets' Specialist.

(*ii*) Similarly, the seed-production assistants at the seed processing plants were not available at the seed processing plants; in their absence processing could not be undertaken. Shri Veeraraghavan immediately made arrangements to post seed processing assistants.

(*iii*) In view of the year's scarcity condition, the seed was not plump, as a result of which large quantities were getting rejected. It was agreed to relax the grading standards of seed size in maize.

As regards the seed that would be available for the purpose of commercial distribution, it was agreed that the staff of NSC should not collect seed directly from the private growers for supply to other states. All the seed would be handed over to the department. In respect of maize, half the quantity would be released for the State, while the remaining half would be given to NSC for supply to other states. In respect of jowar and bajra, 2/3rds would be retained for the Department and the

remaining one-third would be given to NSC for supply to other states.

Under the hybrid seed production programme, a Hybrid Seed Production Officer, Agricultural Officer (HSP) and Agricultural assistants were appointed in every district.

PRESSURE FOR SUPPLY OF PARENT SEED

Meanwhile, the field officers started making enquiries regarding the supply of parent seed. For example, the Superintending Agriculture Officer, Bombay Division, Nasik, wrote to Dr. Vaidya on June 3, 1966: "You are aware that the cultivators are expecting rains by about June 10, 1966 and they are very anxious to have seed, both commercial as well as parent seed, before the rains actually start. I know that parent seed can conveniently be sold in the last week of June and the first week of July. But cultivators are not prepared to wait for the commercial seed. I am getting very pressing demands from all over the division, and it is absolutely necessary to give some approximate time limit in which we will be in a position to supply seed. When I contacted officers at Poona, I was advised to keep mum and to give no reply to any cultivator. You are, therefore, requested to let me know the approximate date so that I can give some assurance to the cultivators".

The letter of *Parishad* Agriculture Development Officer, *Zilla Parishad*, Wardha, of June 8 mentions the following difficulties :

(*i*) Some of the cultivators undertaking hybrid seed production programme were defaulters due to bad season the previous year and their names were being dropped from preparing the Normal Credit Statement. He therefore requested the Department to move the Registrar, Cooperative Societies for the supply of finance to these defaulting cultivators.

(*ii*) Even though some of the cultivators were not in need of credit, they were anxious to obtain manure and fertilizers. The stocks of manure had been reserved for hybrid jowar and maize cultivation but in the absence of receipt of hybrid seed, it had become very difficult to withhold these stocks any further. He, therefore, enquired whether seeds would be received by June 15

since the monsoon was fast approaching and the cultivators were not prepared to wait beyond June 15.

In his letter of June 17, the Superintending Agriculture Officer asked the Divisional Soil Conservation Officer, Aurangabad, to instruct his supervisor to proceed to Poona for lifting hybrid jowar foundation seed from the office of the Superintending Agricultural Officer as per the telegram of the Department.

There was also a demand from the Sugarcane Specialist, Padegaon, dated June 21, saying that lands had been kept ready, the canal was running and was likely to close in a couple of days and therefore seeds were badly required. The letter concluded with a request for immediate action.

Similarly, the Agriculture Development Officer, *Zilla Parishad*, Bhir in his letter of June 11, 1966 wrote as follows : "All preliminaries have been completed. Fields have been fixed and the ridges and furrows are being prepared. All the cultivators are waiting for seed which may kindly be allotted soon." He also suggested that arrangements for processing plants were very necessary for which decisions had to be taken regarding location of the processing plant which should be ready by the time the crop was harvested.

On June 13, 1966, Hybrid Seed Production Officer, *Zilla Parishad*, Satara wrote to Shri K. R. Gupta, Technical Officer that the targets laid down by Government for production of hybrid had to be lowered as the cultivators were not ready to take jowar due to previous bad experience and he requested for the supply of seed for lower quantities.

The difficulties regarding the distribution of parent seeds continued all through June. The *Parishad* Agriculture Development Officer, *Zilla Parishad*, Dhulia, wrote to his Superintending Agricultural Officer that "growers are getting anxious to get the supply of seed" and he did not know what to say to the cultivators. He also brought to his superior's notice the fact that NSC had made direct offers of seed to some of the registered seed growers in his area. He felt that this sort of direct dealing with NSC would be more or less in contravention of the policy of the Director of Agriculture."

A letter on the same lines was also sent by the Chairman, Agriculture and Cooperation Subject Committee, *Zilla Parishad*,

Dhulia, to Shri P. K. Sawant, the Minister for Agriculture, Maharashtra State, Bombay. He pointed out that though they were doing their best to finance the cultivators, the supply of parent as well as commercial seeds was being delayed, thus disturbing the faith in the entire programme. At the same time, direct dealing by NSC was creating misunderstandings and was also likely to lead the cultivators to lose their faith in the agency of the *Zilla Parishad.* A reply to this letter of the Chairman was sent by Dr. Vaidya in which he said, "I have already supplied to your district jowar foundation seed for 100 acres and you must distribute it to the cultivators so that they can start sowing. An additional quantity of jowar foundation seed for 83 acres has also been sent and must have reached your district or will reach in a day or two. The remaining quantity will be sent within this week. As regards foundation seed of hybrid maize and bajra, it has to be supplied by NSC from Delhi and Karnal respectively. However, we are reminding NSC every day and hope it will be available within the next 7-10 days."

A registered seed grower, Shri Prakash Chand Lunavat wrote from Amravati on June 29, 1966, "I have purchased the required fertilizers, pesticides and made all the arrangements and my land is ready for sowing of seed crop now. I was informed that parent seed would be supplied to me through *Parishad* Agriculture Development Officer, Amravati. But the same has not been received so far. I would request you kindly to arrange to send the parents at your earliest convenience." This letter was forwarded by the office of the Director on July 7, to the *Zilla Parishad* Officer, Amravati, asking him to supply the foundation seed out of the district quota. The Agriculture Development Officer, *Zilla Parishad*, Amravati, was one of the late Latifs who sent the particulars about the seed production programme in his district only on June 24, 1966 in the prescribed proforma. On July 14, 1966 the office of the Director of Agriculture sent a letter with the following observation to the *Zilla Parishad*, Amravati, "The sowing of hybrid seed crops in unirrigated condition should be totally cancelled and only the area under irrigated condition should be sown under hybrid seed crops. The area under hybrid seed production during *kharif* season for Amravati district would be reduced to that

extent." The Director pointed out that the seed supplied to the district was in excess of the requirements of the reduced area.

Aware of the pressure from the districts for the supply of foundation seed, the Secretary, Agriculture and Cooperative Department sent a letter on June 17, 1966 to all the Cooperative Education Officers of *Zilla Parishads* with copies to the Director of Agriculture. The letter said, "Frantic efforts are being mooted from the districts for hybrid parent seed to be sown immediately in the districts. Our Hybrid Specialist and NSC have advised us that the sowing should be done between July 5 and July 20 and they expect that foundation seed which is under processing in Walchandnagar for the last 10—15 days and the seed which is arriving by ship from U.S.A. between June 22, and June 27 will be rushed to the districts by trucks as per allotments already made. We expect the seed to be in the districts by the 28th of this month and it should be issued to the seed growers immediately and delivered if possible at their farms immediately thereafter for being sown according to schedule. The farmers should not be allowed to get worried about the seed as we have enough foundation seed at Walchandnagar and the documents pertaining to the consignment on the ship loaded in U.S.A. have already arrived."

On July 22, 1966, the following circular lette- was issued by the Director of Agriculture to all the Cooperative Education Officers: "The Department has already distributed foundation seed of jowar, bajra and maize hybrid seed to the various districts against the fixed targets. It is hoped that the foundation seed has been received at your end and has been further distributed to the cultivators who are participating in the programme of the hybrid seed production in the current season. It is hoped that villages in compact blocks have been selected and sowing of the seed crops in such villages is completed." The letter asked for complete information about the names of cultivators, names of villages and the area sown under seed crops so that the information could be sent to NSC, whose assistants could inspect and supervise the villages, as and when necessary.

REPORTS FROM DISTRICTS

The Agriculture Development Officer, *Zilla Parishad*, Yeotmal proposed the utilisation of certified hybrid seed for

further production of hybrid seed. The Director pointed out in his letter of July 13, 1966 that "hybrid seed has to be produced every year by planting two inbred lines or two single hybrid parents and crossing them." Obviously, there was a considerable communication gap, both administrative and technical.

The information village-wise and cropwise under hybrid seed production from Jalgaon, *Zilla Parishad* came as late as July 6, 1966. Meanwhile, individual requests and orders thereon continued. As late as July 26, 1966 the Director of Agriculture wrote to the *Parishad* Agriculture Development Officer, *Zilla Parishad*, Amravati that one Shri A.D. Ganeriwal might be supplied foundation seed since his land had been brought under irrigation.

Shri Veeraraghavan, Secretary NSC wrote to Dr. Vaidya, Additional Director of Agriculture as follows : "I hope that the foundation seeds have been distributed in irrigated and well-drained areas only. This is the most important factor for proper management of the crop to ensure nicking. For proper certification of the crops, we should immediately have a list of persons who are doing the planting and the acreages and quantity of seeds supplied to them. Till now, we have not got the above particulars." A reminder was issued by the Secretary, Agriculture and Cooperative Department to Dr. Vaidya on July 20, 1966. On July 29, 1966 the Director replied to Dr. Shaikh as follows : "The Cooperative Education Officers of all districts where hybrid seed production has been undertaken are already instructed to prepare a list of persons and villages in each district who have taken up hybrid seed production programme during *kharif* season 1966 and submit the same to the Department and to NSC officers. As the sowings are not yet over, they have not sent the required information. As soon as the same is received from them, full details of the district-wise sowings will be submitted to Government.

Meanwhile, odd requests for supply of seed continued to come in. One such request was from *Zilla Parishad*, Thana on July, 21, 1966 regarding supply of seed to Adarsha Dugdhalaya, Palghar. The Director replied in his letter of August 3, 1966, that the request for supply of foundation seed of maize was too late. They were, however, advised to approach the Superintending Agriculture Officer, Bombay Division, Nasik.

Detailed information about the list of cultivators under hybrid seed production programme was sent by the *Zilla Parishad,* Agriculture Development Officer, Poona, on July 20, 1966. Similar information came from Agriculture Development Officer, *Zilla Parishad*, Kolhapur on August 3, 1966. The village-wise and crop-wise information of the hybrid seed production programme for *kharif* 1966 came from the *Zilla Parishad*, Bhir, with their letter of 27th July. The report from Satara came on 28th July, wherein it was pointed out that the sowing of the crops was still in progress due to delayed rains and hence the final report would be submitted in due course.

Meanwhile, the Superintending Agriculture Officer, Nagpur wrote on July 14, wanting to know the exact dosage of fertilizers for hybrid jowar seed production, since there was some discrepancy between the figures given in the Bulletin on Hybrid Seed and those given in the reference from NSC.

Difficulties continued with NSC regarding their contacting directly the registered seed growers. The Agriculture Development Officer, *Zilla Parishad,* Ahmednagar, wrote on July 18, 1966 as follows :

"NSC has supplied seed to some of the seed growers directly. This has the disadvantage in that the seed producers who have been supplied the seed through NSC will have to part with 33 per cent of the produce in favour of the Corporation. This means a substantial slice of the produce will be lost to the department, especially when the department is facing acute shortage of certified seed. The Corporation should not operate directly with the seed growers, thus interfering with the programme chalked out by the department."

Information from the various districts regarding village-wise and crop-wise position was sent on different dates throughout August and September, 1966.

VARIOUS DIFFICULTIES

Observing on the selection of the seed areas, the Additional Director wrote as follows in August 1966 : "It is seen from the village-wise and block-wise information that the area under hybrid seed production has been scattered over a very large number of villages." It was again pointed out how it would be difficult for the personnel of the department and the National Seeds

Corporation to visit the plots for inspection, since harvesting would be about the same time in all the places. It was decided that in future the seed production programme should be located in as few villages as possible and should be in compact blocks. This was another instance of failure of communication.

By the beginning of September, pressure started for the in pection of the hybrid seed crop. The Agricultural Development Officer, *Zilla Parishad*, Sangli, for example wrote to the NSC officer that jowar and bajra crops had already come up to the boot stage. He, therefore, requested them to chalk out a programme for inspection immediately.

Meanwhile, a circular letter of September 19, 1966, of Shri Anand Sawant, Officer-on-Special Duty (Hybrid Seed Production and Research) sent to all the *Zilla Parishads*, threw some light on the manner in which this programme was carried out during the year 1966. "In the recent statewise tour, it was repeatedly found that some of the jowar parent seed that we received was of inferior quality which has considerably affected the nicking. The seed had various defects. It was small, shrivelled, mouldy, broken, insect-infested, improperly processed and having no marks as to its germination percentage. Under these circumstances, the seed should be checked and rechecked before it is planted in order to avoid disappointment and failure of crops."

"This *kharif* season, we have planted smaller acreage than the acreage for which jowar parent seed was distributed. This has resulted in left-over seed at various *Zilla* centres and other sub-charges. It was found in some of these centres that the seed was improperly stored and the seed was getting mouldy or infested with grain weevil. This is a serious matter and immediate steps should be taken to inspect the seed, clean it and store it under proper conditions until next planting.

"On August 3, I had sent a letter requesting Agricultural Development Officers of *Zilla Parishads* and Estate Managers, Maharashtra State Farming Corporation, to furnish information on the acreage planted under seed production of the three hybrid crops and the parent seed left after planting. This information was due on August 20, 1966. Some did return the forms with informa ion but others have failed." He, therefore, requested them to send the information before September 30. A copy

of the letter was marked to the Plantation Manager, Maharashtra State Farming Corporation, Poona, to see that the seed was stored properly. There was, however, no instruction as to what proper storing meant.

REVIEW OF PROGRAMME FOR KHARIF 1966

A note reviewing the programme for *kharif* 1966 details various points. Bulk of the jowar foundation seed, *i.e.*, about 30,000 kg. was received from U.S.A. in June 1966. It was contemplated previously that the foundation seed sown in early *kharif* would provide certified seed for use in *rabi* season 1966. Since, however, the sowings were delayed on account of delayed monsoon in the whole of Maharashtra by about a month, it was expected that certified seed would not be available till the beginning of December 1966, though small quantities might be available from the first week of October onwards. As regards processing plants, the note said that out of 8 plants, 4 had been set up and were in operation at Nasik, Kolhapur, Parbhani and Akola, while the remaining four were being set up at Manjri, Satara, Buldhana and Nanded. The Cooperative Sugar Factory, Sangli, had already its own processing plant. Besides this, Government had sanctioned 9 more processing plants to be set up at Nagpur, Wardha, Yeotmal, Amravati, Jalana, Dhulia, Bhir, Osmanabad and Sholapur. The Maharashtra State Farming Corporation was setting up a processing plant at Gangapur besides the two already set up at Walchandnagar and Changdevnagar. Three processing plants were set up by private growers at Jalna, Phaltan and Shrirampur.

SEED PRODUCTION PROGRAMME : RABI 1966

A letter from Dr. Vaidya, Additional Director of Agriculture, to Dr. Shaikh, of July 27 1966, gives the position regarding the achievements in *kharif* season 1966 and the programme for *rabi* 1966.

"As against the target of 28,000 acres jowar, 6000 acres bajra and 8000 acres maize for the hybrid seed production programme during the *kharif* season of 1966, the seed received from all the sources including the imported seed was sufficient to cover 21,990 acres under jowar, 2826 acres under bajra and 6105 acres under hybrid maize. It is expected that ratoon of

summer planted jowar crop will be approximately 300 acres out of 800 acres of successful jowar crop of summer 1966. Thus there would be a shortfall of an area of 5710 acres under jowar, 3174 acres under bajra and 1895 acres under maize.

"The targets fixed for hybrid seed production in *rabi* 1966 are given below :

Jowar	:	17,000 acres	(11,850 State+5150 Maharashtra State Farming Corporation)
Bajra	:	750 acres	
Maize	:	6,750 acres	

"In addition to the above, it would be necessary to cover additional acreage to wipe out the shortfall in *kharif* season. Thus the total area to be sown in *rabi* season 1966, would be 22,710 acres jowar, 3924 acres bajra and 8645 acres maize. It is, however, observed that the area under maize crop in Maharashtra State is hardly 1 lakh acres more. The cultivators are also finding it difficult to sell the produce from the commercial crop as maize is not consumed as staple food in any part of the State. Hence the target under hybrid maize seed production can be conveniently reduced to 4000 acres in *rabi* 1966. In case of jowar, it is expected that the seed growers will take a ratoon crop in *rabi* 1966 over at least 10,000 acres out of 21,990 acres under jowar in *kharif* 1966. It is not yet certain whether a successful ratoon crop of bajra can be taken. It will, however, be tried in *rabi* 1966 over a small area. Thus the total area required to be put under hybrid seed production and the foundation seed requirements for this area would be as given in the Table 11.

TABLE 11

Crop	Acres	Female parent	Male parent
Jowar	12760	37280 Kg.	25520 Kg.
Bajra	3924	3924 Kg.	1962 Kg.
Maize	5000	75000 TVK	25000 TVK

"From the position of the availability of foundation seed of jowar with NSC, it may be assumed that CK 60-A seed, *i.e.*, female

parent of jowar hybrid, would have to be imported from the U.S.A. As regards male parent of jowar, sufficient quantities would be locally available and procured. About 750 kg. of male parent of bajra hybrid is also available w'th the department.

"It would, therefore, be necessary to import about 40 tonnes of CK 60-A seed from U.S.A. for use in the State during *rabi* 1966 and to make arrangements for supply of seeds of other crops from NSC. Please write to NSC to arrange for the import of 40 tonnes of seed of female parent of jowar and also to make arrangements for supply of 4000 kg. of female parent and 1250 kg. of male parent of bajra hybrid and 75,000 T.V.K. female parent and 25,000 T.V.K. male parent of Deccan double hybrid maize. It is essential that this seed is in our hands by the September 15, 1966 at the latest. If NSC places orders immediately, the seed from U.S.A. can be had in time even by cargo incurring less expenditure on freight.

"I am sending a copy of this letter to Shri Veeraraghavan and Dr. Y. R. Mehta for information and taking advance action. You are, however, requested to confirm these requirements with NSC and request them for immediate action."

NSC was informed of the requirements of the quantity of foundation seed, though it was not definite how much they would be able to supply.

DISCUSSION WITH CENTRAL GOVERNMENT OFFICERS

The programme was further discussed at a meeting with the officers of Government of India held at Bombay on September 1, 1966 which was attended by Shri I. J. Naidu, Joint Secretary, Ministry of Food and Agriculture, Shri Hit Prakash, Agricultural Commissioner (Seeds) and Shri Y. R. Mehta, General Manager of the Corporation and Dr. Vaidya, Additional Director of Agriculture. A note recording proceedings of the meeting includes the following observations regarding the programme for the *rabi* season 1966.

> "As regards hybrid seed multiplication in *rabi* 1966 our programme has been drastically cut down under jowar. We wanted foundation seed for 22,760 acres of which 10,000 acres will be under ratoon and the seed for remaining area of 12,760 acres is to be supplied by NSC. Shri Hit Prakash said that he is unable to supply any seed in *rabi* season

because parent seed multiplication programme at Walchandnagar in *kharif* season has been inordinately delayed. The Maharashtra State Farming Corporation should have sown 700 acres under parent seed of hybrid jowar by now, while hardly 70 acres have been sown. This has caused a lot of concern both to Government of India and to the Department, as it would bring down the supply of foundation seed for *rabi* season and subsequently targets under commercial hybrid jowar in *kharif* 1967-68 would be reduced. Shri Naidu desired that Secretary, Agriculture and Cooperation Department should take up this matter urgently with Maharashtra State Farming Corporation so that the area is sown immediately, so that some seed might be available for sowing in late *rabi* season for certified seed multiplication. If that is not done, we will have to be content with whatever seed multiplication we have undertaken in *kharif* and the ratoon crop of the same in *rabi* 1966. As regards bajra, he has agreed to the target of 3.924 acres under foundation seed and to supply the required quantity of seed. This would be available by the middle of December 1966. Even though that is late, we have to sow it as we have no other source of bajra foundation seed. As regards maize, we wanted foundation seed for 4000 acres. Shri Naidu expressed that we would have raised sufficient certified seed to cover 6 lakh acres in *kharif* season and in view of less demand for hybrid maize seed we should not multiply any certified seed in *rabi* 1966. He has, therefore, advised us to drop certified seed production of hybrid maize altogether in *rabi* season. As regards seed and fertilizer requirements for *rabi* seed multiplication programme, the figures mentioned in our note have been accepted."

FIELD INSPECTIONS

During his tour of some districts in September 1966, the Additional Director of Agriculture inspected hybrid seed production plots of jowar, bajra and maize. During this tour, the district officers, seed producers and Superintending Agricultural Officers placed before him many difficulties regarding isolation distance found in seed multiplication plots, roguing of bajra seed multiplication plots and arrangements for processing of hybrid seed

which was expected to be ready in a fortnight. These difficulties were discussed at a meeting on October 5, 1966.

The seed production assistants of NSC were required to visit the fields for inspection of crops and remain present at the time of harvesting, thrashing and then at the processing plants. As there were only 3 seed production assistants in a district, it was felt that it might not be possible for them to look to all these operations simultaneously. The following arrangements were therefore agreed to. As soon as the crop was ready for harvesting, the grower should harvest the male parent lines. After harvesting, the seed production assistant should be requested to inspect the crops. After his inspection, the remaining female lines could be harvested by the growers in the presence of the officers of the Agricultural Department, if the seed production assistant could not be present.

Whenever the area under seed crop was small, the harvested earheads from female parent lines should be transported to the seed processing plant for thrashing and other processing operations. Where the seed production area was in blocks of 50 or 200 acres, the harvested earhead or cobs should be dried in the sun and then thrashed in the village itself. But proper precautions should be taken and the whole process should be carried out in the presence of the seed production assistants. After the thrashing was over, the seed grains should be filled in gunny bags, marked and sealed in the presence of the seed production assistants or the Hybrid Seed Production Officers of the district concerned. This should then be transported to the processing plants for further operations of cleaning, treating, etc.

At the processing plants, cleaning should be done in the presence of the officers of the Agricultural Department. However, further operations in processing such as treating, bagging, certification would invariably be done in the presence of the seed production assistant of NSC. The earheads or cobs of the crops brought to the processing plants from the villages would be thrashed at the processing plants after the same had been inspected by the seed production assistants of NSC and then processed.

The other difficulty was about roguing of bajra seed crops. The seed production assistants of NSC insisted on the roguing of all types of plants except those having grey colour earheads.

It was felt that colour of the anthers or of the awns did not make any difference and such plants should not be rogued. The variation in colour of anthers or awns should not be taken into consideration. Shri Rana of the Corporation who was present at the meeting agreed on this point but said that he would discuss this in Delhi and let the Department have the views of experts in Delhi.

On the question of isolation distance in bajra, it was felt that it was very difficult to maintain isolation distance of 400 metres and 200 metres should be all right. It was decided that while a decision on the point would be taken by the Expert Committee at Delhi, so far as the standing crop was concerned, 200 metres would be taken as isolation distance.

REVIEW OF WORK DONE AND PLANS FOR 1967-68

The review of the progress made in the production programme 1966-67 and the programme for 1967-68 were discussed at a meeting of the Maharashtra State High Level Agricultural Production Committee at the Chief Minister's residence. The Committee noted with satisfaction the progress and particularly the fact that over 70 per cent of the total hybrid seed in he country had been produced in Maharashtra in 1966-67. It was decided to go ahead with the full programme for the next year. It was also decided to take advance action for the year 1968-69 to produce hybrid seed of jowar, bajra and maize as well as IRR 8 paddy over an area of 60,000 acres so that a total acreage of 70 lakhs of acre could be covered under high-yielding hybrid varieties of food crops in the State.

It has not been easy to piece together the picture of he process of planning and implementation of the hybrid seed production programme from its inception till 1966. Though the office of the Director of Agriculture provides a window to the activities of planning taking place in the State Government, Union Government and NSC on the one hand and the office of the Superintending Agricultural Officers, *Zilla Parishads* and District Agricultural Officers, on the other have played a considerable part in the implementation of the programme. So for a fuller understanding of the entire process, it is necessary to shift the scene of observation to these other offices also. Nevertheless, even the study of the proceedings in the office

of the Director of Agriculture has revealed the immense complexity and intricacy of planning which proceeds from the level of Union Government down to the farms of individual cultivators. It is often stated that the implementation of agricultural programmes, as perhaps of others, requires a single line of command and obedience. That this is over-simplification can be seen from the fact that any such programme involves operations of multiplicity of agencies which are not always amenable to the application of the principle of unity of command.

To yoke together the activities of all these with their numerous units in a single programme is a very challenging task of organisation. There are many communication gaps, technical lacks, conflicts, overlaps, lack of coordination, lack of timely action and sometimes differences of views many of which are illustrated in this case study. The bottlenecks indicated and the points of delay identified here ought to lead to progressive improvement in the process of planning and plan implementation.

APPENDIX I

(I) A Note on Hybrid Maize, Jowar and Bajra

It is a well-known fact that yields of some cross-fertilised crops have been increased by taking advantage of heterosis obtainable by crossing two or more pure lines. This principle was also utilised in producing hybrid maize, jowar and bajra. In the case of hybrid maize, two pure lines were crossed and hybrids obtained. Since the male and female flowers are situated at two different locations on the same plant in maize, hybridisation is done by planting 4 lines of the female parent which is detasseled before anthesis (flowering) alternated by one or two lines of the male parent. In the case of jowar and bajra, the male and the female parts are situated in the same spikelet; hence production of hybrid seed is difficult in these crops. The usual method of emasculation and pollination will not be practicable for producing hybrid seed on a large scale. To overcome this difficulty, efforts were made to produce male sterile lines in these crops since 1929, and in U.S.A. they could establish male sterile lines by 1954 and the production of hybrid sorghum (jowar) started in that country since then. Male sterile lines were developed in bajra also. Once the male sterile lines are developed, it is not difficult to produce hybrid seed. Hybrid seed in jowar and bajra can be produced by planting alternately four lines of male of sterile variety and two lines of a good fertility restoring variety. The seed is set on the male sterile lines through wind pollination. This would be the hybrid seed to be sown by the cultivator to raise a high-yielding hybrid variety.

The Indian Council of Agricultural Research, New Delhi, in collaboration with the Rockefeller Foundation has so far developed four maize hybrids named Ganga 1, Ganga 101, Ranjit and Deccan. Of these, the Deccan double hybrid has been found to be suitable for the maize-growing areas of the state as was found after conducting trials thereof at some research stations in the state and at the college farms. This hybrid gives about 35 to 60 per cent more yield than the local varieties. In 1964-65, the area under hybrid maize seed production was 30 acres in the state at three locations, namely, the Gramsevak Training Centre, at Manjri (17 acres), the Taluka seed Farm at

Mohol (6 acres) and the Taluka seed Farm at Sholapur (7 acres).

The Indian Council of Agricultural Research with the collaboration of Rockefeller Foundation has also developed jowar and bajra hybrids. The jowar hybrid was developed by utilising *kharif*-60, a male sterile line (American male sterile line) and pollinating with some of the yellow endosperm varieties. The bajra hybrids were developed by crossing C.M.S. Tift 23A and 18A male sterile lines (of African origin) with some fertility restorers like BJL 3-B, CMS 63, etc.

Work on transference of male sterility in Indian varieties was undertaken in 1958 at Parbhani and Nagpur in this state and, by the end of 1962, four maintainers' strains together with four male sterile lines were developed at Nagpur. The use of these lines is made in the production of hybrid jowar. In America, the work of production of hybrid jowar is going on since 1946 and they have developed jowar hybrids for grain, fodder, etc. However, since jowar is not used for human consumption, the quality aspect of grain is of no consequence there, high yield being the sole consideration. In India, jowar is a staple food of majority of the people in some of the states, especially Maharashtra. To overcome this difficulty, concerted efforts were made in this state to transfer the male sterility character of American varieties into Indian varieties and, as mentioned above, we have partly succeeded in doing so despite our limited resources of staff, land, etc.

During the last two years (1963-64 and 1964-65) 15 jowar hybrids developed by the Indian Council of Agricultural Research, New Delhi, were tried at Dhulia, Akola, Jalgaon, Digraj, Parbhani and Golegaon and it was observed that these hybrids yielded strong 23 to 220 per cent more grain over the respective check of standard state varieties. Of the hybrids tried, M.S.×I.S. 84, M.S.×I.S. 2930, M.S.×I.S 2931, M.S.×I.S. 2933, M.S.×I.S. 2938, M.S.×I.S. 2945, M.S.×I.S.2953, M.S.×I.S. 3798 and M.S.×I.S. 1122 have in general been found to be the best in grain yield and can be said to be adaptive enough. These hybrids mature within 90 to 100 days, while the local checks mature within 100 to 150 days. The above hybrids respond very well to high doses of fertilisation. The fertilisers applied were 60 to 100 lbs N and 40 to 60 lbs P_2O_5 per acre depending on the location of the trial.

The bajra hybrids developed by the Indian Council of Agricultural Research were tried at Niphad and Vaijapur in 1964-65. It was observed from these trials that a bajra hybrid yielded 20 to 30 per cent more than the check (N. 28-15). The hybrids CMS 23 A×CM 63, CMS 23 A×BIL 3-B and CMS 101 A+BIL 3-B have been found to perform well in this state.

Last year (1964-65), trials of the Nagpur hybrid, *i.e.*, M.S. 22-5-16×Nj. 164 were taken at three places, *viz.*, Dhulia, Somnathpur and Nagpur. It was observed that this hybrid yielded 29 to 272 per cent more than the standard respective checks at these places. This year, it has been decided that trials of this hybrid along with promising Rockefeller hybrids should be taken at some of the research stations. It has also been decided at a meeting held in the Directorate of Agriculture with Rockefeller Foundation Experts that two promising hybrids, *viz.*, CSH 1 and M.S.×I.S. 3691 should be tried on all the *Taluka* Seed Farms and Trial-cum-Demonstration Farms in the jowar growing districts of the state.

The Indian Council of Agricultural Research, New Delhi, has recommended the release of CSH 1 (M.S. Kharif—60A× I.S. 84) and hybrid bajra No. 1 for commercial cultivation throughout the jowar and bajra growing areas of the country. The states have joined the coordinated sorghum hybrid project sponsored by the Indian Council of Agricultural Research in collaboration with Rockefeller Foundation and they have released the above hybrids for general cultivation.

Jowar hybrid seed production has been taken up by three progressive cultivators in this state under the supervision of the National Seeds Corporation. The Department has not taken up production of Indian Council of Agricultural Research jowar hybrids so far, since the recommended jowar hybrid has yet to be tried all over the state which is being done in this *kharif* season.

A separate scheme was submitted by the Millets Specialist, Maharashtra State, Parbhani, to the Department recently for the trial of maize jowar and bajra hybrids and also for the production of hybrid seed thereof. Seed of the Nagpur jowar hybrid is being multiplied at the Agricultural College, Nagpur.

Since a separate scheme as mentioned above has been prepared and sent to the department for onward transmission to Government, this project has not been included in the Fourth

Five Year Plan, the allotment for the strengthening of research therein being too short of the requirements.

(II) A Note on Production of Hybrid Maize Seed

It is a well-established fact that hybrid seeds give higher yields compared to ordinary seeds due to heterosis, otherwise known as hybrid vigour. In order to exploit this natural phenomenon of hybrid vigour, the work of producing hybrid seed by crossing different varieties of maize was first started in U.S.A. It was a great success. The hybrid seed gave anything from 150 per cent to 300 per cent more yield than the ordinary maize seed.

In India too, the work of hybridisation was undertaken under the aegis of Indian Council of Agricultural Research by importing pure bred strains of maize seed from U.S.A. in collaboration with the Rockefeller Foundation.

Briefly, the process of evolution of hybrid seed consists of making two single crosses of four pure bred strains of maize seed having desirable qualities and to further crossing single hybrid to produce double hybrid seed as diagramatically shown below :

Pure strains	A × B		C × D
Single hybrid parents (foundation seed	E	X	F
		↓	
		Double hybrid seed	

The Indian Council of Agricultural Research has uptill now evolved 9 improved varieties of hybrid maize under he coordinated maize breeding scheme and these varieties are now recommended for large scale cultivation in the country under the auspices of the National Seeds Corporation. These varieties are :

	Name of the variety	*Brief description*
1.	Ganga hybrid Makka 1	...An early hybrid recommended for IndoGangetic Plains.
2.	Ganga hybrid Makka 101	...A hybrid of medium maturity recommended for Western India
3.	Ranjit hybrid Makka	...Recommended for Western India.

4.	Deccan hybrid Makka	...75 per cent to 140 per cent more yield. Recommended for peninsular India.
5.	Double cross hybrid Makka VL-54	...Recommended for Himalayan Hills, foot hills and Indo-Gangetic Plains.
6.	Ganga safed hybrid Makka-2	...Recommended for Eastern and Western U.P., Bihar, Bengal and North and Eastern Rajasthan.
7.	Hi-starch hybrid Makka	...Possesses greater percentage of starch. It has been released to meet the demand of the starch industry
8.	Ganga hybrid Makka 3	...This hybrid possesses bright orange yellow fruit grains and has been released for Indo Gangetic plains.
9.	Himalayan hybrid Makka-123	...This hybrid is released to cater to the needs of the Himalayan region comprising different agro-climatic areas differentiated by latitude, altitude and rainfall pattern.

The Indian Council of Agricultural Research is the sole agency for distribution and handling of inbred lines developed under the coordinated hybrid maize breeding scheme.

The work of production of foundation seed (single hybrid seed and pollinator parents) is now being undertaken by he National Seeds Corporation, in collaboration with the U.S.A.I.D. and Rockefeller Foundation Further work of distribution of foundation seed to certified seed growers, its planting, inspection of the standing crops, detasseling operation, harvesting, drying, processing, clearing, grading and finally packing in conveniently sized cloth bags, arid sealing and certification is also done under the direct supervision of the National Seeds Corporation.

FERTILIZER DISTRIBUTION FOR HIGH-YIELDING VARIETIES PROGRAMME (WHEAT) — 1967-68 — IN KANPUR

S. S. SIDHU

This case study narrates the efforts made by the District Administration in Kanpur to meet the challenge posed by an enhancement of the target of acreage to be covered by high-yielding varieties of wheat from 11,150 acres during the *rabi* season of 1966-67 to about 1,10,000 acres during the following *rabi* season of 1967-68. It highlights the problems faced in regard to the distribution of fertilizers and the related question of credit facilities to be offered to farmers for the purchase of the fertilizers. The ten-fold target was in fact exceeded.

The study incidentally throws light on the relationship between the district level and the State level administration in the formulation and implementation of a development programme.

Two successive droughts in India—during the years 1965-66 and 1966-67—had highlighted the urgent need for stepping up agricultural production at a much faster pace than visualised till then. This problem engaged the attention of all levels of planning—the Union Government, the State Governments and the District Administration. The propagation and use of high-yielding varieties was a major plank in the strategy adopted for such accelerated agricultural production.

During 1966-67, a beginning had been made in this direction all over the country. In Uttar Pradesh (U.P.) as an experimental measure, about 8.90 lakh acres were covered.

As part of its Annual Plan for the year 1967-68, the State Government decided, in consultation with the Union Government, to expand the coverage of this programme substantially from 8.90 lakh acres in 1966-67 to 32.50 lakh acres in 1967-68. The target for the district of Kanpur, the subject-matter of this case study, was stepped up from 11,150 acres to 1,10,000 acres : an increase of about 10 times as against the four-fold increase for the whole State. The number of cultivators involved was

about 29,000.

The key factors in the implementation of this programme were : distribution of seed, availability of assured irrigation and imely distribution of fertilizers. The distribution of seed did not present any problem because the previous year's programme had left adequate quantity of seed with the cultivators in the District. Actually, some seed was even diverted to meet the seed requirement of neighbouring districts. Water and fertilizer however, caused serious concern. And with fertilizer, as with seeds, was involved the supply of credit.

The appropriate sowing season for *rabi* wheat is between October 25, and the November 20.

The District of Kanpur is one of the most important-in U. P. Generally, the Collector of this District is a senior IAS officer. By 1966-67, the Collector had become the king-pin of District Administration. In addition to the traditional law-and-order and revenue functions, he had increasingly acquired a coordinative role in all developmental activity in the district, acting generally as the focal point of communication and coordination between he State Government and the District administration. To assist him in the discharge of his developmental functions, he had a full-time officer, designated Additional District Magistrate (ADM, Planning).

The District Agriculture Officer, Kanpur received a communication dated May 15, 1967 regarding the enhancement of the targets for Kanpur for acreage under high-yielding varieties of wheat from the Deputy Director of Agriculture, Allahabad Region. The communication stated that district-wise targets had been fixed by the Agricultural Production Commissioner[1], U.P., in consultation with the Deputy Development Commissioner[2] at a meeting held at Lucknow on March 4, 1967, and that these targets were based on the extent of the total wheat area and the irrigation potential available in each district. The

[1]The Agricultural Production Commissioner was also *ex officio* Secretary of the Departments of Agriculture, Cooperation, Animal Husbandry, Cane, Minor Irrigation and Panchayat Raj.

[2]In U.P. the Development Commissioner (redesignated as Agricultural Production Commissioner-cum-Rural Development Commissioner) had several Deputies; each Divisional Commissioner's charge had one Joint Deputy Development Commissioner. Kanpur district falls within the jurisdiction of the Divisional Commissioner, Allahabad.

target for the *rabi* season, 1967-68 for the district of Kanpur, intimated in this communication, was 90,369 acres (60,246 Mexican wheat 30,123, U.P. wheat).

When this communication arrived, the Collector of Kanpur had already handed over charge as he was under orders of transfer. The new Collector had not yet arrived; the senior-most ADM was holding temporary charge.

This communication was followed by a circular letter of July 7 from the Agricultural Production Commissioner to all Collectors. The letter stated that the Union Government had accepted the State Government's proposal for bringing 30 lakh acres under high-yielding varieties (20 lakhs, Mexican; 10 lakhs, K 68).

The circular urged that district-wise targets on the basis of the extent of acreage with assured irrigation facilities should be fixed by July 15, 1967.

Almost simultaneously, there was a communication from the Deputy Development Commissioner (South), Allahabad, stating that the target of 52,000 acres (35,000 acres, Mexican; 17,000, UP) should be appropriate for Kanpur. In this letter, the targets for other districts of the Division were also indicated.

Not much later, the District Administration received a comprehensive circular letter of August 9, 1967, from the Agricultural Production Commissioner. In this circular, amongst other things, it was indicated that the State target was 35 lakh acres (22.5, Mexican; 12.5, K 68 and other improved UP varieties). The district-wise targets were also indicated; the target for Kanpur was 88,000 acres (57,000, Mexican ; 31,000, UP).

The new Collector arrived in Kanpur towards the end of July 1967. He was a senior IAS Officer with about 15 years' service His immediately preceding assignment was that of Secretary to the Planning Department at Lucknow. Prior to that, he had held the post of Secretary to three successive Chief Ministers, the last one being the Chief Minister of the non-Congress Government that had come into power after the 1967 elections. His posting to Kanpur was part of the general plan of the new Government in UP, to post senior officers, particularly those who had done long years in the Secretariat at Lucknow, back to the district.

Within two days of his arrival, the Collector got wholly

involved in handling a difficult law and order situation. This engaged his attention for about 10 days.

About this time, the comprehensive circular of August 9, from the Agricultural Production Commissioner arrived. The circular contained detailed instructions on the dosage of fertilizers, its composition, administrative matters such as training of staff and farmers, the selection of farmers, the preparation of input cards about the participating cultivators, sources of production, finance supervision of the programme, etc. Two points emphasised most in this circular, as being essential to the success of the programme, were assured supply of water for 3 to 5 irrigations and the timely supply of fertilizers.

The dosage of fertilizers recommended was :

(In Kg per hectare)

	Mexican			UP Wheat		
	N	P	K	N	P	K
Basal dressing	45	45	45	35	35	35
Top-dressing	45	—	—	35	—	—

Farmers had to be selected both from amongst those who were members of Cooperative Societies as well as others.

The entire data about inputs, actual supplies, etc., were to be maintained on "input cards" introduced for the purpose. For each participating cultivator, there had to be an input card.

In respect of finance, it was indicated that 50 per cent of the requirements would be met from within the allocation of the Agriculture Department from what is normally called *taccavi* loans, 30 per cent from out of the resources of the Cooperative Department and 20 per cent by outright cash payment by such of the participant farmers as could afford to, and desired to pay, cash.

Finally, it was desired that, on this basis, the total requirements of credit finance for seed and fertilizers, split up department-wise between Agriculture and Cooperation, should be worked out and a District Agricultural Plan prepared and communicated to Lucknow by August 15, 1967. The department-wise split-up was necessitated by the then existing administrative arrangement; credit was to be given to the cultivators, not in cash, but in kind. Thus, for example, the Cooperative

Department had to organise supply of fertilizers to the district to meet its 'credit' target for cultivators seeking 'credit' from Co-operative Societies. These supplies were channelled through cooperative seed stores. The Agriculture Department had to organise its own supply of fertilizers for cultivators seeking credit under the normal agricultural *taccavi* loans; these supplies were channelled through the agriculture seed stores. Those paying cash could obtain fertilizers either from the agriculture seed stores or from the open market.

The Collector set in motion the administrative machinery of the district to select farmers, to prepare their input cards, to assemble data relevant to the preparation of the district agricultural plan, etc. Meanwhile, another communication arrived from the Agricultural Production Commissioner in the last week of August, 1967, in which the targets for the State were again revised and the revised target for Kanpur was 1,10,000 acres (77,700 acres Mexican ; 32,300 acres UP).

The Collector was greatly concerned. From a figure of 52,000 acres, the target for his district had been raised to 110,000 acres. The Agricultural Production Commissioner had emphasized that the key to the success of this programme depended upon the acreage under assured irrigation; such acreage in Kanpur district was roughly 84,000. So 26,000 acres had to depend on some sort of marginal irrigation; they were situated mostly in canal-irrigated tracts; and canal irrigation could hardly be depended upon to provide the much-needed 3 to 5 irrigations.

The work relating to the selection of cultivators, calculation of necessary inputs and the preparation of input cards was already under way. The stepping up of the target to 1,10,000 acres involved (*i*) checking back with cultivators who had already responded, to persuade them to increase their respective acreage and (*ii*) seeking new cultivators. The scope for new cultivators was limited. The Collector had to depend on the increase in the acreage of the cultivators, who had already responded; and this meant a substantial amount of re-doing of the work relating to the input cards.

The Collector also felt that the proforma of the input cards was a bit complicated for the simple farmers. It could have been simplified with considerable advantage to the cultivator; this would also have reduced paper work for the field worker.

While the District administration was trying to cope with this work, an urgent wireless message was received on September 4, 1967, from the Agricultural Production Commissioner, directing that the selection of farmers should be completed within 4 days thereof and their application forms for credit transmitted to the Assistant Registrar, Cooperative Societies for cooperative credit and to the District Agriculture Officer for *taccavi* credit.

The Collector felt this was impossible. The ADM (Planning) during a visit to Allahabad mentioned to the Deputy Development Commissioner (South), Allahabad, and the Regional Deputy Director, Agriculture that it was not possible to do this within four days. He emphasized that the success of the programme was dependent to a considerable extent on the proper selection of cultivators and that this work should not be hurried through.

Meanwhile, however, the Collector geared up the district administration to complete the work as quickly as possible. *Panchayati Raj* institutions at the *Gaon Sabha* and Block Levels were also closely associated with this work. Meetings were held at the *Gaon Sabha* level wherein the selection of cultivators for the high-yielding varieties programme was finalised. These meetings also provided an opportunity for imparting training to the participating cultivators. As the programme had to be taken up on a very large area, it would have been very difficult for the Village Level Workers to contact individual cultivators and to find out their attitude, resources and requirements. Information regarding selection of farmers and their individual requirements emerging from the village level was consolidated and thereafter discussed at the Development Block Level. These meetings were attended, apart from the *Pradhans* of *Gaon Sabhas,* by the Block Level officers of Agriculture, Cooperative and Minor Irrigation Departments.

By September 15, 1967, the requirements of fertilizer for the *rabi* campaign, on the basis of individual input cards, were worked out; simultaneously, the ADM (Planning) took stock of the situation regarding availability of stocks in the district, and struck a balance (See Table 1).

According to the instructions in the comprehensive circular of August 9, 50 per cent of ammonia sulphate, 100 per cent

TABLE 1

Chemical Fertiliser	Require-ment	(In m. tonnes) Availability			Percentage of availability to requirement
		Agri. Sec.	Coop. Sec.	Total	
Nitrogenous fertilizer in terms of ammonium sulphate	18,228	4,344	854	5,198	28.5
Phosphatic fertilizer (in terms of super-phosphate)	11,392	3,845	270	4,115	36.1
Potassic fertilizer (in terms of muriate of potash)	3,142	577	nil	577	18.3

of super-phosphate, and 100 per cent of muriate of potash was to be utilized for the basal dressing. The stock position was not adequate even for the basal dressing and the time for commencement of the sowing season was drawing close.

As soon as the ADM (Planning) sized up the position regarding availability of fertilizer stocks in the district, he alerted the Deputy Development Commissioner and the Regional Deputy Director (Agriculture). He urged speedy despatch of fertilizers to Kanpur.

The Collector followed up ADM's alert by a letter to the Agricultural Production Commissioner on September 30, that "even for the basal dressing, the available quantity of fertilizers is far too inadequate. In case the fertilizers are not made available within the next ten days, it will be difficult to meet the requirements of the Blocks as also to transport them to respective seed stores well in time and thus the programme may receive a serious set-back."

The State Government attached great importance to the successful implementation of this programme. They had instructed the Divisional Commissioners to keep themselves fully *au fait* with progress from time to time. The Divisional Commissioner, Allahabad convened a meeting on October 4-5, 1967 to discuss the progress of this programme in his Division. The Collectors of Kanpur, Allahabad, Fatehpur, Farukhabad and Etawah were present. The Collectors of

Kanpur and Fatehpur expressed grave anxiety about the availability of fertilizers in their districts. The Divisional Commissioner, immediately sent an urgent wireless message to the Agricultural Production Commissioner urging the need for rushing fertilizers.

But no fertilizers arrived in Kanpur; nor was any communication received from the State Headquarters. So the Collector sent another wireless message on October 18, to the Agricultural Production Commissioner stating :

> "Hardly any improvement in availability of chemical fertilizers for high-yielding varieties programme despite my D.O. of 30th September, crash wireless from Commissioner ALD dated 5th October and our telephonic conversation dated 7th October . Only 6952 tonnes of nitrogenous fertilizers available both in agriculture and cooperative stores against requirement of 18228 tonnes. 4846 tonnes of phosphatic fertilizers available against requirement of 11392. Similarly, only 1000 tonnes of potassic fertilizers available against 3038 tonnes of requirement. Thus fertilizers not available even for basal dressing. As already mentioned at least ten days are taken for supplies to reach villages. Sowing operations have already commenced. Entire *rabi* Campaign for high-yielding varieties will be jeopardised unless required quantities of fertilizers physically reach Kanpur by 22nd October. Any supplies received thereafter would be of no utility for the *rabi* Campaign. Would request action on top priority."

He followed this up with a telephonic reminder to the Agricultural Production Commissioner when he was told that appropriate instructions had already been given for the early despatch of fertilisers to Kanpur.

The main supplies started arriving at Kanpur after October 25, 1967, when the sowing season had already commenced; and the time involved in moving the fertilizers to the cultivators was, as already indicated by the Collector to the Agricultural Production Commissioner, about 10-15 days. The supplies came in such abundance that this itself created a problem about which we shall learn a little later.

Meanwhile, the Collector faced a near crisis regarding the

availability of cooperative credit. It will be recalled that the State Government had instructed that 30 per cent of credit facilities needed by cultivators for this programme would be provided by the Cooperative Department. According to the programme, about 7,500 cultivators were to receive credit facilities from the cooperative sector. The total amount involved was Rs. 61 lakhs to meet the requirements not only of fertilizer but also of seed. This credit was to be channelled through the District Cooperative Bank.

The availability of this finance through the District Cooperative Bank created a problem. The State Government had not been happy with the working of the Kanpur District Cooperative Bank. They wanted a change in the management; particularly, they were anxious to replace the Managing Director. The State Government had made an attempt to do so but failed as the Managing Director sought and obtained a stay order from the Allahabad High Court. The State Government was disinclined to support the channelizing of funds into this bank till the matter was resolved. They had, therefore, declined to recommend the District Cooperative Bank's application to the Reserve Bank for sanction of the needed credit limit. The District Cooperative Bank, therefore, was not enabled to meet the commitments expected of it.

The State Government was quite aware of this difficulty when the target of 30 per cent cooperative credit had been indicated to the Collector. However, matters came to a head when 7,500 cultivators lined up, in accordance with the directions of the State Government, to avail of credit facilities from the cooperative sector; but cooperative finance was not available. So ADM (Planning) apprised the Additional Registrar, Cooperative Banking about this near crisis situation when the latter visited Kanpur around the middle of September. He also sent a telegram to the Registrar, Cooperative Societies at Lucknow.

When, on September 30, 1967, the Collector took up the matter of the difficult position of supply of fertilizers with the Agricultural Production Commissioner, he had also, on that very day, written to the Registrar, Cooperative Societies about the crisis, arising from the failure of the District Cooperative Bank to provide the needed credit. A copy of his letter to the

Registrar, Cooperative Societies, had been endorsed to the Agricultural Production Commissioner who was *ex officio* Secretary, Cooperative Department, also.

In this copy, the Collector had indicated a way out of this seeming impasse. He suggested that the commitments originally envisaged for the cooperative sector should be met from the agricultural sector and appropriate authorities should be asked to enhance the allocation for this sector. The Collector emphasised the need for urgent action and stated :

> "This is obviously a very serious matter and unless the limit of agricultural *taccavi* is raised so as to cover the cooperative sector also or some other alternative is proved, I am afraid, the success of the *rabi* programme will be jeopardised. A very early action is requested in the matter."

The Collector reiterated this point in another communication on October 14, 1967 to the Agricultural Production Commissioner.

The failure of the District Cooperative Bank, Kanpur to provide credit facilities and the consequent inability of the cooperative sector to meet its commitment with regard to cooperative members had also come up for consideration in the meeting convened by the Commissioner, Allahabad on October 4-5, 1967 to discuss the progress of *rabi* campaign in this Division. The difficulty of the Collector, Kanpur to meet the needed finance for almost 7500 co-operative members in the programme was recognised and the Divisional Commissioner sent an urgent wireless message to the Agricultural Production Commissioner, urging immediate action to augment the *taccavi* allocation under the agricultural sector so as to meet the required credit. A copy of this wireless message was also endorsed to the Registrar, Cooperative Societies.

Meanwhile, the Registrar, Cooperative Societies, had conceived of another idea to dislodge the Managing Director of the District Cooperative Bank. He wanted the Collector to assume charge of the management of the District Cooperative Bank under some emergency powers. At his instance, the State Government formally directed the Collector to do so. But the Collector declined. He thought that his functioning as the Managing Director of the Bank under a Board of Management,

consisting of non-officials of the District would be, administratively, unwise. Also, he felt that the emergency powers alluded to by the State Government could not be strictly invoked in the circumstances of the case. While declining to act under the formal directions of the State Government, he made a specific reference to headquarters, indicating his point of view. He endorsed a copy of his reference direct to Secretary, Judicial Department of the State Government. No formal communication was received by the Collector in this regard; he learnt later that the Judicial Department had upheld his point of view.

The Collector felt that under the circumstances, it would be best to abandon the idea of credit facilities being extended to cultivators through the cooperative sector.

Meanwhile, the Registrar, Cooperative Societies, wrote to the Collector, in response to his letter of September 30, 1967, stating that he had asked the Additional Registrar and the General Manager of the Apex Bank at Lucknow to go over to Kanpur and discuss the matter with him. In this letter, the Registrar had mentioned : ' Necessary action, if any, would be taken as per your advice. I don't think there would be any bottleneck and much more so as you are there." The Registrar, Cooperative Societies, also wrote to the Divisional Commissioner, Allahabad in response to the latter's wireless message of October 5, 1967. He mentioned in this letter, "I am trying to ensure that special arrangements are made for distribution of production finance from the cooperative sector, provided District Magistrate, Kanpur gets a clearance from Government that action proposed to be taken by him will be valid in law. In the alternative the Agricultural Production Commissioner is said to have agreed to fill the gap as desired by you from the agricultural sector. The supply line in the cooperative sector, of course, will be maintained, irrespective of the fact whether the production finance is arranged from the cooperative sector or from the agricultural sector".

The Registrar was evidently referring to the proposal that the Collector should take charge of the Bank as its Managing Director. The proposal, as we know, was made by the State Government and not by the Collector.

Meanwhile, the Agricultural Production Commissioner visited Kanpur and held a meeting at the residence of the Collector

to discuss the *rabi* programme. He conveyed his formal agreement about enhanced allocations from the agricultural sector so as to meet the credit needs of participating cultivators falling in the co-operative fold. He asked the Collector to go ahead in providing necessary credit finance to cooperative members under the head "Agricultural *taccavi*", from funds available with him. He mentioned that this amount could be recouped from Government from time to time. This was formally confirmed by him on October 30, 1968.

Meanwhile, instructions were received by the District Agriculture Officer from the Director of Agriculture to dilute the prescribed doses of nitrogenous fertilizer by 50 per cent with regard to K 68 and U.P. varieties. They were also asked to reserve these fertilizers for farmers, participating in the high-yielding varieties programme. The Regional Director of Agriculture further conveyed on October 19, 1967 that even the prescribed doses of phosphatic and potassic fertilizers were to be reduced to 2/3rd and half respectively.

This change in the prescribed dosage of chemical fertilizer meant some modification in the input cards. In some cases, they had to be prepared afresh. Applications for credit had also to be recast in pursuance of changes in input cards. In some cases, it was possible to give effect to the revised instructions; in others, it could not be done.

Instructions were also received from the headquarters that the fertilizers should in the first instance, be supplied for basal dressing alone and that the supplies for top dressing should be made at a subsequent date, by which time the nitrogenous fertilizers might be available. This meant that the cultivators had to go twice to receive fertilizers—once for the basal dressing and later for top dressing.

Another problem that arose related to the financial powers of the BDOs. Under the existing delegations, BDOs were authorised to sanction *taccavi* loans up to Rs. 250 only. The optimum dose prescribed by the Agriculture Department envisaged chemical fertilisers worth Rs. 150 for an area of one acre. Cultivators participating in high-yielding varieties programme had an average holding of 3.6 acres. The requirement of fertilizers in respect of most of them worked to Rs. 500. Each application involving *taccavi* loan of more than Rs. 250

had to be referred to district headquarters for necessary sanction by the District Planning Officer. This caused delay and hampered timely distribution of fertilizers to the cultivators. But the district administration went ahead.

Under the then existing practice, the District Cooperative Development Federation acted as an agent of the Provincial Cooperative Federation for arranging the supplies of fertilizers for the needs of the cooperative members. Instructions were received from the Provincial Cooperative Federation (PCF) in September, 1967 that the prevailing agency system should be wound up; the cooperative societies were asked to enrol themselves as members of PCF for arranging these supplies directly and also to deposit a security of Rs. 4,000/- for this purpose. PCF also conveyed its decision not to issue fertilizers exceeding four times the value of the security. After a few days, even the amount of security was varied according to the capacity of the cooperative institution. This shift in the existing policy of PCF meant further delay in the arrangement of fertilizer supplies in the cooperative sector.

As mentioned already, when the fertilizers did begin to arrive, they arrived in such large quantities as to create additional problems. The following Table shows the quantity of fertilizers received from the Agriculture and Cooperative Departments during the period October 25 to November 21.

TABLE 2

	Nitrogenous in terms of ammonium sulphate		Phosphatic in terms of superphosphate		Potassic in terms of muriate of potash	
	Agri.	Coop.	Agri.	Coop.	Agri.	Coop.
1st to 25th Oct. 67	452.80	480	nil	nil	nil	378
26th to 31st Oct. 1967	6359.00	nil	3537	nil	nil	nil
1st to 7th Nov. 1967	3680.00	nil	1759	nil	889	nil
8th to 14th Nov. 1967	870.00	nil	627	nil	nil	nil
15th to 21st Nov. 1967	2019.00	nil	1429	nil	201	nil

There was a spate of supplies between October 28 and November 21, 1967 from the Agricultural Department. The stocks were received without prior intimation and even details of supplies and types of fertilizers were not known in advance.

Handling of the supplies and their transportation presented a number of problems. No storage capacity for such heavy stocks was available at the Railway Station or at the district headquarters. Fertilizers were kept in the open, subject to hazards like fire, rain and theft. Maintenance of accounts also presented difficulties due to rush of arrivals and despatches. Details of consignments received and despatches to sale centres could not be finalised in time. Proper supervision over the distribution in the field could not be exercised as most of the staff was busy with the transportation and handling at the receiving point and similar work at the seed stores and sale points. The entire planning staff which was geared to meet this task worked, at times, for almost 16—18 hours continuously.

While the heavy arrivals of fertilizers were on, the local Executive Engineer of Irrigation Department created a near crisis by refusing to allow public carriers, transporting heavy loads of fertilizers, to ply on the canal roads. Most of the villages, not being connected by village roads, had to be fed through canal roads. Without the use of canal roads, the supplies of fertilizers would have been delayed further. Formal permission from higher authorities would have entailed delay and might have jeopardised the entire movement schedule of fertilizers. The Collector had to intervene and order use of canal roads beyond the prescribed loads[3], on his own responsibility. With this bottleneck resolved, it was possible for him to ensure quick transportation of fertilizers at the sale points in the rural areas.

Bulk arrivals of fertilizers precipitated the need for adequate sale centres[4] in the rural areas from which the supplies

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[3]The existing rules about usage of canal roads prescribe a certain load limit which it was not possible to adhere to in this case.

[4]A sale centre was a point from which inputs, namely, seeds and fertilizers or pesticides were given to the cultivators. Apart from the seed store under Agriculture and Cooperative Departments, additional centres were also opened to meet the input requirements of cultivators. While a seed store envisaged a regular storage godown with a complement of staff, *viz.*, one store keeper, one salesman, one peon-cum-chowkidar, a sale centre was an *ad hoc* point of supply manned by a single functionary. Seed store and sale centre both served as points for distribution of inputs. Apart from the cooperative seed store, a large-sized cooperative society could serve as a sale centre.

could flow quickly to the cultivators. Kanpur district had 23 such sale centres under the Agriculture Department and 53 under the Cooperative Department. Most of the cooperative sale centres had remained closed for want of supplies and also due to the failure of the District Cooperative Bank to provide credit to the cooperative members in the high-yielding varieties programme. The main brunt had, therefore, to be borne by a limited number of seed stores of the Agriculture Department. The establishment of a regular seed store or sale centre would have meant formal approval of the Government in the Agriculture Department and would have entailed delay. The Collector got several additional sale centres opened, on his own responsibility and manned the same by diverting the staff from the Development Blocks. This greatly helped in ensuring speedy flow of fertilizers to the cultivators, participating in the programme.

Despite all these difficulties, it was possible to meet the demand of fertilizers, required by the cultivators at least for the top dressing, if not for the basal dressing to the desired extent. The actual coverage in the high-yielding varieties programme was about 1,40,000 acres as against the target of 1,10,000 acres. The coverage in the earlier year, *i.e.*, 1966-67 under this programme was 11,150 acres, The distribution of fertilizers in terms of ammonium sulphate was six times, *i.e.*, 13,200 tonnes during 1967-68 as against 2275 tonnes in 1966-67; super-phosphate more than ten times, *i.e.*, 5149 tonnes during 1967-68 as against 450 tonnes in the earlier year, and similarly muriate of potash 796 tonnes in 1967-68 as against 250 tonnes in 1966-67.

The increase in production resulting from the high-yielding varieties programme was about 30,000 tonnes. The following Table is relevant in this regard :

TABLE 3

	1966-67	1967-68
Area in acres	2,46,846	3,09,600
Production in tons	1,24,276	1,85,710
Average yield in mds/acre	13.71	16.33
Total increase in production in tons		61,434
Increase in average yield per acre over 1966-67 (mds.)		2.62
Total increase in production. (in tons) due to increase in acreage		31,434
Total increase in production (in tons) due to H.V.P.		30,000

The target set for the district of Kanpur was not only achieved, but was exceeded by quite a margin. The Collector had cause to feel happy. But, in retrospect, he wondered if timely rains did not constitute the most important factor enabling him to achieve the targeted coverage in terms of acreage. Eighty four thousand acres had no doubt assured irrigation facilities. The other areas were able to absorb fertilizer, etc., only on account of the well-spaced and adequate rains. The Collector shuddered to contemplate what the consequences on the receptivity of the farmers to the high-yielding varieties and improved agricultural practices would have been, had the rains failed.

The Collector also wondered what the consequences in terms of timely completion of the programme would have been, had he, on the two or three occasions, when he exceeded his formally delegated authority, decided to refer back the problem, posed on those occasions, for resolution to the appropriate State Government authorities at Lucknow. In terms of results, the Collector was pleased that he had acted as he, in fact, did. But what if the programme had not succeeded? And what, if the State Government had pulled him up for having exceeded his authority?

THE EXPANSION OF AGRICULTURAL EDUCATION IN MAHARASHTRA

P. K. KATHPALIA

The subject of the case study is the expansion of agricultural education in Maharashtra at the undergraduate level in the Third Five Year Plan. The main focus of the study is the operation of Centre-State relations at different stages of decision-making—in determining needs, in formulating plans, in determining the institutional form in which expansion should take place, in adopting measures to secure adherence to decisions. The study throws light also on certain aspects of manpower planning in an area which relates substantively to the States but in which coordination is the responsibility of the Centre. It brings out the role of correct data in detailed planning and the importance of continuous and cooperative communication between the Centre and the States. Besides, it reveals, on the one hand, the extent of the trust reposed in the State in its ability to plan and, on the other, the effectiveness of the instruments available with the Centre to discharge its responsibility.

Under the Constitution, Education is a State subject but entry 66 of List I of Schedule VII of the Constitution entrusts to the Centre the responsibility for the co-ordination and determination of standards in institutions of higher education in scientific and technical subjects. Although no law has been passed by Parliament under this entry for co-ordinating and determining standards of agricultural education, the Department of Agriculture of the Government of India does discharge this responsibility to a considerable extent through the Indian Council of Agricultural Research (ICAR), one of the functions of which is "to promote, guide and co-ordinate agricultural and husbandry education. . .". While educational activity is carried on by the States, ICAR, in the discharge of its co-ordinating function, lays down norms for the educational institutions covering various aspects, *e.g.*, syllabi, academic and research facilities, physical facilities, admission capacity. During the

period to which the case study relates there were no cut-and-dried arrangements for enforcing these norms. This feature contributed to the direction that this particular case took and is to be contrasted with the arrangements existing in the Ministries of Education and Health, both of which have set up elaborate administrative procedures for the enforcement of norms evolved for similar purposes. (Annexure I).

In the earliest phase of planning after Independence, it was discovered that there was a paucity of agricultural graduates. Though some steps had been taken to expand the facilities for agricultural education at the commencement of the First Five Year Plan, these were not based on any careful assessment of the requirements of trained agricultural staff. ICAR found that serious difficulties were being experienced in some parts of the country owing to an acute shortage of trained personnel and concluded that, with the expansion envisaged in the agricultural sector, agricultural training programmes required considerable stimulus to provide the required number of trained personnel. The Government of India reviewed the requirements of trained personnel in the field of agriculture in early 1955 and estimated the requirements for the Second Plan period at 6,500. With an output of 4,500 at that time, there was a deficit of 2,000 agricultural graduates which was sought to be made good by starting new agricultural colleges, two of them to be located in Maharashtra. As a result, the rate of admission in that State went up to 2,789 in 1957-58 as against 1,254 in 1953-54. In 1957, the Planning Commission felt it necessary to make a fresh assessment of the requirement of trained personnel in the agricultural sector for the Second and Third Plan periods and to make arrangements for the training of such personnel. It accordingly set up in March 1957 an Agricultural Personnel Committee, headed by the Secretary, Department of Agriculture, Government of India, to go into the problem. This Committee furnished its report in March 1958 and placed the overall additional requirement of agricultural graduates for the entire country at 27,500 for the Third Five Year Plan, necessitating an annual out-put of 5,500 graduates. (It was too late to do very much for the Second Plan as it took four years to produce a graduate in agriculture). Assuming a wastage of 10 per cent, the Committee felt that there should be facilities for

the admission of 6,000 students. Wastage in excess of 10 per cent should be viewed seriously and measures taken to reduce it after thorough investigation. The admission potential of the existing institutions (including the University proposed to be started at Rudrapur) was estimated at 4,700 and the Committee recommended the starting of some new agricultural institutions and the expansion of training facilities in the existing establishments to make up the gap of 1,300.

It may be noted here that the figure of 5,500 representing the annual requirement of graduates was computed on an all-India basis. State-wise figures were indeed collected and it was reckoned that some States would be surplus and some, deficit. Accordingly, the Committee did recommend that additional colleges should be opened in deficit areas. Nevertheless, as revealed in discussions, which the case writer had with the officials concerned, it was obvious that the Department of Agriculture, in computing the total shortage, had not taken into account the fact that the inter-State mobility of the graduates of surplus States would be very limited and that the actual deficit that needed to be met would, therefore, be much more.

The overall estimate of 27,500 graduates as being needed during the Third Five Year Plan was not accepted in full by the Planning Commission as it included a large item (11,500) for the provision of agricultural graduates at the block level. Leaving out this item, the estimate came to about 16,000 agricultural graduates which was accepted by the Planning Commission. As a result of the expansion of agricultural education in the Second Plan (a number of private institutions had sprung up in Uttar Pradesh that had not been planned for) the number of admissions had risen to 4,600 by 1960. The Planning Commission proposed to increase the training capacity to 6,000 per year during the Third Plan period. The Planning Commission, however, also gave the general advice that, in the Third Plan period, emphasis should be laid on improving the quality of education rather than the number of graduates.

These estimates underwent changes in ICAR in the light of new developments in agricultural plans, and, as a result, the additional requirement of agricultural graduates during the Third Plan was eventually estimated at 20,000. By the time this figure was arrived at, it was already 1960. ICAR argued

that it took four years to produce a graduate and by the time, the new proposals for expanding facilities for agricultural education were put into effect and graduates turned out, the beginning of the Fourth Five Year Plan would be within sight. It, therefore, felt that planning for agricultural education should begin to take account of the Fourth Plan requirement at this stage itself even though this could not be calculated with precision. According to ICAR, this requirement could, on an *ad hoc* basis, be assumed to be about 50 per cent more than the requirement of the Third Plan, *i.e.*, 30,000 graduates.

These estimates were accepted by the Manpower Steering Committee on which the Planning Commission, the Manpower Directorate and ICAR were represented and later by the Agriculture Division of the Planning Commission.

When the detailed proposals went finally to the Planning Commission, they tentatively accepted the estimate of 20,000 graduates for the Third Plan as a working basis on which to plan further. The Planning Commission did, however, point out that the estimate was not based on any correct calculation, for only six States had sent their requirements of graduates in the Third Plan period. The projection for the other States was based on figures of population. No mention was made of the estimate of the requirement of 30,000 graduates for the Fourth Plan period. It was 1960 already and it had been pointed out by ICAR that, to produce the personnel required for the Fourth Plan period, training plans needed to be prepared and put into effect without delay.

For Maharashtra, the requirement of graduates was estimated by ICAR in October 1960 at 1,875 and their out-turn at 2,870, resulting in a surplus of 995 graduates. For the Fourth Plan, it was estimated by ICAR that the requirement would be 2,800 as against an out-turn of 3,800. The figure of out-turn was calculated by ICAR on the basis of a 20 per cent wastage—a figure uniformly applied to all States. However, the estimate of out-turn thus worked out was not cleared with the State governments. That wastage in Maharashtra also would be 20 per cent was assumed and not verified by reference to the State Governmen . Nor was it based on empirical data. Plans for Maharashtra were decided upon at the Centre on this assumption.

The broad objective of ICAR was that each State should

become self-sufficient in its requirement of agricultural graduates by expanding facilities in existing institutions, where possible and establishing new institutions, where necessary. The Planning Commission had pointed out in March 1961, that in meeting the demand for more graduates, the existing institutions should be expanded to their full capacity. Admission in an agricultural college should be around 100 and in no case less than 80. New colleges should be planned if necessary, only after existing institutions had reached their full capacity.

With these figures and with these guide-lines, it was estimated in June 1961 by ICAR that Maharashtra did not need to add to the existing number of colleges but that the intake in the then existing colleges should expand from 896 in 1960-61 to 930 in 1965-66.

It may be added that there were five colleges in Maharashtra in 1959 and that the Centre did not envisage any increase in this number. However, in 1960, steps were taken by Maharashtra to open a college at Dhulia. Although ICAR raised objections, the Government of India accepted the Dhulia College as part of the Plan programme as will be clear from the narration of events in the paragraphs following.

While manpower estimates were being finalised at the Centre, the draft of the Third Plan for agricultural education was received from the Maharashtra Government in October 1960 by the Ministry of Food and Agriculture. (The process of formulating Five Year Plans as well as Annual Plans and the mechanics by which approval is accorded and central assistance released are described in Annexure II). This was sent to ICAR for examination. The Government of Maharashtra proposed a provision of Rs. 126.80 lakhs for improvement and expansion of the existing agricultural colleges. This provision did not include an item of Rs. 50 lakhs, proposed independently for the establishment of an agricultural college at Dhulia. As according to its calculations, there was a considerable surplus of graduates already, ICAR was not in favour of accepting the entire provision proposed. The office proposed the acceptance only of Rs. 25 lakhs for the improvement of existing colleges. The Under Secretary, ICAR suggested a provision of Rs. 60 lakhs for the improvement of facilities in existing colleges and asked for the comments of the Chief of Agricultural Education. The

latter pointed out that in view of the surplus estimated by ICAR itself, some of the existing colleges may have to be closed. There was, therefore, no justification for an increase in the provision from Rs. 25 lakhs as proposed by the office to Rs. 60 lakhs. He also opposed the establishment of an agricultural college at Dhulia for the same reason.

The Under Secretary, however, doubted whether the State Government would agree to the suggestion of the Chief of Agricultural Education that a few of the existing colleges be closed. Regarding the Dhulia College, the Under Secretary stated that, as it had already been started by the State government (even though without the approval of the Working Group at the Centre), ICAR had no alternative but to agree to the provision of Rs. 50 lakhs proposed for it. In addition, as against the State government's proposal for a provision of Rs. 126.80 lakhs for improvement of the existing colleges, a reduced provision of Rs. 60 lakhs should be allowed. He was not, however, in favour of any further increase in the number of colleges. Thus, in all, he was agreeable to the inclusion of an amount of Rs. 110 lakhs as against the amount of Rs. 176.80 lakhs asked for. These suggestions of the Under Secretary were approved by Secretary, ICAR and the comments of ICAR sent to the Ministry of Food and Agriculture on these lines.

The issue was debated in the Working Group that met in October 1960 to finalise the Third Five Year Plan and the annual Plan 1961-62 for Maharashtra. The State representatives laid stress on agricultural education and said that the provision suggested by them was absolutely essential. They disagreed with the calculations made by the Centre, according to which a surplus of agricultural personnel was expected in Maharashtra. While accepting the estimate of requirement at 1,875, they pointed out that the out-turn would be considerably less than that anticipated by the Centre, the actual wastage being much higher than that assumed by the Centre. Besides, a number of graduates would not offer themselves for government service. Although no figures were produced by the State representatives, regarding the number of graduates who would not join government service, the argument was not challenged. The representatives of the State went on to say that the provision asked for by them included a substantial amount for putting up buildings and laboratories

in some of the colleges started lately for these had been accommodated in rented buildings which was not a satisfactory arrangement. The Working Group thereupon recommended an allocation of Rs. 126.80 lakhs for the expansion and development of agricultural colleges including the Dhulia college. In making this recommendation, the Working Group specifically pointed out that this was being recommended in view of the limitation of funds. The State representatives, however, did not agree to any reduction in the provision proposed by them for agricultural education.

In June 1961, in response to the Planning Commission's instructions, the Maharashtra Government sent the revised Third Five Year Plan to the Agricultural Department. In this, as against a provision of Rs. 126.80 lakhs agreed to by the Working Group for the scheme "Expansion of Agricultural Colleges", an amount of Rs. 199.48 lakhs had been proposed. The scheme included the items mentioned in the table.

TABLE 1

(Rs. in lakhs)

	Recurring	Non-recurring	Capital		Total
			Loan	Other	
Staff	27.84	—	—	—	27.84
Contingencies	9.75	—	—	—	9.75
Equipment	—	18.39	—	—	18.39
Land	—	—	—	10.10	10.10
Buildings	—	—	—	128.20	128.20
Grant to Amravati College	—	5.20	—	—	5.20
Total	37.59	23.59	—	138.30	199.48

The object of the scheme was to expand the facilities for graduate and post-graduate studies in agriculture, including facilities for agricultural extension at the agricultural colleges in the State. The scheme envisaged :

(*i*) the introduction of post-graduate courses (M.Sc. Agr.) in 12 subjects at the Agriculture College, Poona with an annual intake of 72 students;

(*ii*) an increase in the intake capacity of the Agriculture College, Dhulia from 50 to 100;

(*iii*) the establishment of extension wings in the Agriculture

Colleges at Akola, Parbhani and Dhulia and the expansion of the existing extension wing in Poona and Nagpur;

(*iv*) a provision for essential staff, equipment, laboratories, libraries, etc., in the government agricultural colleges in the State; and

(*v*) grants-in-aid to the Agriculture College at Amravati, which was a private college, for its expansion.

The annual out-turn of agricultural graduates was expected to increase from 200 to 450 by the end of the Third Plan.

The revised plan proposed by Maharashtra was again examined in ICAR. The Chief of Agricultural Education opposed it, this time on the ground that a multiplicity of institutions within the State would necessarily mean thinly spreading the available resources. This would create weak centres of training, isolated from the general stream of agricultural research and extension. He pointed out that the policy recommended by the Joint Indo-American Team and accepted by the Planning Commission was to establish agricultural universities with an integrated approach in the field of education, research and extension. He expressed himself in favour of allowing the allocation to remain at the figure proposed by the Working Group, *i.e.*, Rs. 126.80 lakhs.

When the case went to the Under Secretary, he pointed out that, of the amount of Rs. 199.48 lakhs proposed by Maharashtra, a major portion—Rs. 128.20—was accounted for by buildings for the existing colleges alone. The only new institution was the college at Dhulia which had already been started and taken note of by the Working Group. The provision proposed was thus meant to strengthen the institutions, already established. He, therefore, proposed the acceptance of the enhanced provision made by the Maharashtra Government. This was the view adopted by ICAR, communicated to the Ministry of Food and Agriculture and accepted by the Government of India in consultation with the Planning Commission.

In January 1962, the Ministry of Food and Agriculture forwarded to ICAR the Annual Plan for Maharashtra for 1962-63. A provision of Rs. 31.98 lakhs was proposed by the Maharashtra Government for the expansion of agricultural colleges. The provision was to be utilised for the expansion

of the admission capacity of the agricultural colleges and for the continuance and expansion of the agricultural college at Dhulia. ICAR had no comments to offer on these proposals which were approved by the Working Group at the meeting held on January 16, 1962.

The Annual Plan for 1963-64 was received by the Ministry of Food and Agriculture and sent to ICAR for comments in December 1962. A provision of Rs. 30 lakhs was proposed by the State Government. ICAR had no comments to offer. In other words, it approved this provision.

While collecting material for answering a Lok Sabha Question in March 1963, ICAR discovered that the Maharashtra Government proposed to start an agricultural college at Kolhapur in 1963-64. It noticed that the sanction for the establishment of such a college during 1963-64 had been issued by the State Government on April 9, 1963. The sanction envisaged a total expenditure of Rs. 1.5 crores on this college, of which an amount of Rs. 52 lakhs was required during the remaining period of the Third Five Year Plan. The sanction for 1963-64 was Rs. 2.78 lakhs. The admission capacity of this college was to be 50 to begin with.

This was a new scheme and did not find any mention in the approved five year plan. Therefore, according to the procedures obtaining at that time, it could not have been started as a plan scheme without the prior approval of the Planning Commission and the Government of India. As soon as ICAR became aware of this fresh development, it consulted the Planning Commission and wrote to the Government of Maharashtra (May 1963) that the establishment of an additional college in the State was not justified. The requirement of the State which was about 1,870 graduates, it said, could easily be met by the existing colleges which with an annual admission capacity of 778 students would turn out 3,112 graduates in a period of five years. In computing this figure, the wastage was once again taken to be 20 per cent, even though the State representatives in the Working Group assembled in 1960 had pointed out that the actual wastage was much higher and also that many graduates preferred employment in the private sector. ICAR added that, even if the State government's plea be accepted that there would be a shortage of 236 graduates, this could easily be met by

expanding the capacity of some of the smaller colleges already existing, *e.g.*, Akola or Dhulia. It added that the output from the existing colleges should prove sufficient even for the Fourth Five Year Plan period. It drew attention to the policy of agricultural education accepted by the Government of India that "increased demand for graduates should be met by expanding existing colleges where facilities exist. New colleges may only be developed as part of an agriculture university or where it is established that existing colleges will not meet the needs." The State Government was, therefore, asked to reconsider their decision to start a new agricultural college at Kolhapur. ICAR followed up this letter by writing another, seeking to re-inforce its point of view with that of the Regional Advisory Committee which in a meeting held three months earlier, had observed that the region (in which Maharashtra was included) was well served in higher education for agriculture and that further addition of agriculture colleges in the region should be discouraged.

The reply to ICAR came after repeated reminders in October 1963. The State Government pointed out that the admission capacity of the existing colleges would be 882 (presumably after carrying out the expansion proposed separately in their Annual Plan). However, the wastage would be not 20 per cent as visualised by the Centre but more than twice as much, if past experience was any guide. The average wastage during the years 1959-60 to 1962-63 had been 45.6 per cent; that for the year 1962-63 being 57 per cent for all government colleges and 66 per cent, if the figures for the private college at Amravati, were also taken into the reckoning. The actual out-turn would, therefore, be considerably less than the figure of 3,112 calculated by the Government of India. Taking past trends of wastage into account and assuming that 65 per cent of the graduates produced would join the Agriculture Department, the number available would be 1,273. As against this, the total requirement would increase to 2,516, the increase being due, as explained by them separately, to the expansion of intensive cultivation and package programmes. There would thus be an actual shortage of 1,243 graduates during the Third Five Year Plan. A shortage of this order could not possibly be met by increasing the capacities of the existing colleges at Akola and Dhulia. The admission capacity of the Akola college had already been doubled since

the year 1959-60. The Dhulia College was still housed in temporary buildings and its admission capacity could not be expanded until the completion of permanent buildings. To meet these shortages and to cater for the Kolhapur region, the new agriculture college at Kolhapur had been started. The Maharashtra Government hoped that the Government of India would agree to the opening of this college.

The October letter from the State Government was preceded by the "mid-term appraisal of the Third Five Year Plan of Maharashtra" and followed by the Annual Plan proposals for the year, 1965-66. In the mid-term appraisal, the decision of the Maharashtra Government to open the Kolhapur college had been mentioned along with a gist of the reasons that led them to take this step. On receipt of this appraisal, ICAR had written to the Ministry of Food and Agriculture, opposing the establishment of this college. The Annual Plan proposed by Maharashtra for 1964-65 contemplated an outlay of Rs. 35.74 lakhs for this scheme. ICAR commenting on the Annual Plan said that the wastage in the colleges of Maharashtra was alarmingly high and emphasised that the representatives of the State Government who would participate in the forthcoming discussion of the Working Group should be asked to take measures to reduce this wastage rather than open new colleges. In the meeting of a sub-group of the Working Group, held in November 1963, the representatives of Maharashtra said that the procedure for admission to agricultural colleges had been improved and steps taken to reduce the wastage. But they added that the policy of the State Government was to provide one college in each agro-climatic region and one school in each district so as to bring agricultural education within easy reach of the students in the interior areas. Extension wings were provided in each agricultural college. The sub-group recommended that the provision proposed by the State Government be accepted and this recommendation was endorsed later by the Working Group which met under the chairmanship of the Agriculture Secretary.

While the Working Group agreed to the proposal of the State Government to make a provision for the Kolhapur college, ICAR continued separately but simultaneously the correspondence it had started with the State Government regarding this

college. Thus in answer to the October letter of the State Government, it repeated that the wastage in their colleges was much too high and that steps should be taken to reduce it rather than open new colleges. The matter was not pursued thereafter. (The Maharashtra Government did take steps to reduce the wastage in agricultural colleges. To attract better talent to these colleges, they improved the service conditions of agricultural teachers and besides, raised the age of entry into service as well as of superannuation for technical personnel in the field of agriculture).

In December 1964, the Maharashtra Government sent proposals for the Annual Plan for agricultural education for 1965-66. This was examined by ICAR on December 23, 1964 and no objection was taken to any item. However, in the meeting held later on the same day of the appropriate sub-group (at which no representative from ICAR was present) the representatives of the State Government mentioned that their actual needs were much greater and that their plans for agricultural education had been circumscribed by financial limitations. Nevertheless, they had formulated two "advance action schemes"[1], one of them being the establishment of two new agricultural colleges involving an outlay of Rs. 13.46 lakhs during 1965-66. This scheme had not been included in the outlay that they had proposed in the draft plan sent. A discussion ensued on this subject after which the sub-group recommended that a provision of Rs. 13.46 lakhs be allowed for these two colleges. This recommendation was accepted by the main Working Group, presided over by the Agriculture Secretary. The recommendations of the Working Group were approved by the Planning Commission who communicated their approval to the Ministry of Food and Agriculture (in the co-ordinating Directorate of Economics and Statistics). When ICAR received the minutes of this meeting, it recommended

[1]An 'Advance Action Scheme' is a scheme of an important nature which is meant to be executed substantially in the plan period following but for which initial and preparatory action is started in the middle of the plan period, preceding that for which the scheme is primarily meant, irrespective of the consideration and final decisions regarding the shape and size of the subsequent plan. Approval of such a scheme does not mean a commitment on the size and nature of such programme though the probability of its inclusion in the subsequent plan is considered to be high.

that no new college need be established in Maharashtra in the Fourth Plan and that the shortages arising there could be met by increasing the capacity in the existing colleges which now numbered 7. There was complete unanimity within ICAR on this approach and the Under Secretary observed that according to the figures furnished by the State Government themselves to the Working Group set up to formulate the Fourth Plan, the additional requirement of Maharashtra of agricultural graduates would be 1,704 and their out-turn 1,715, there being a small surplus as a result. ICAR, therefore, suggested that the two "advance action schemes" be dropped. The Ministry of Food and Agriculture upon this observed that the schemes had been approved by the sub-group to which the views of ICAR were not available. The file was sent to the Planning Commission for any comments that they had to make before the State government was addressed by ICAR. The Planning Commission agreed with the views of the Ministry.

Accordingly, in March 1965, ICAR wrote to the Government of Maharashtra, emphasising that the establishment of new colleges involving considerable outlay and expenditure of foreign exchange was not justified, particularly as the needs of Maharashtra could be met by expanding the existing colleges. The Maharashtra Government answered, after five months, that their requirements could not be thus met. The arguments adduced by them were :

(1) The existing institutions even after expansion could not meet the anticipated shortage of agricultural graduates. (Again figures were given which were different from those of the Central Government and indeed this time also from those given by the State Government themselves to the Working Group for the Fourth Plan. The Fourth Plan requirement was expected to be 3,089 graduates, the likely availability being 2,360 from the existing colleges after accounting for the anticipated wastage and the number who would seek careers outside government service. The Third Plan requirement was stated to be in the vicinity of 2,500. The earlier figure of 1,704, it was explained subsequently to the case writer, was probably sent to the Government of India inadvertently; it really

represented only the requirement under the sub-head 'agricultural production" and did not take into account the requirement for other sectors, *e.g.*, soil conservation, area programme, minor irrigation, etc. This discrepancy, however, was not commented upon by the Government of India and the figure of requirement now given was not disputed).

(2) The existing institutions could not and should not be expanded to an unlimited extent. The optimum was felt to be 200 students in an institution and this figure had already been reached or exceeded in four of their colleges. As for the remaining three, it was proposed to increase the admission capacity of the Kolhapur college from 110 to 150 and of the Parbhani college from 154 to 200 in 1965-66. The Dhulia college could not be expanded for various reasons.

(3) The State of Maharashtra could be divided into six-agro-climatic regions of which only two were covered fully by existing colleges. In particular, the heavy rainfall zone had no agricultural college.

For these reasons, the Maharashtra Government had opened one new agricultural college at Dapoli in the Konkan region from June 1965 as an advance action scheme of the Fourth Five Year Plan.

ICAR found these arguments unconvincing. The Under Secretary who decided that the case was now fit for submission to the Director-General gave his reasons for not accepting the arguments of the Maharashtra Government. First, the calculations of the Maharashtra Government were questionable, for on the basis of the admission capacity already available with them and assuming a 30 per cent wastage (as against 45 per cent assumed by Maharashtra on the basis of past performance) the State Government would still have 4,500 graduates by 1969-70. The basis of the State Government's assessment of the availability of graduates at 2,360 was, therefore, not clear. (He did not notice that the Maharashtra Government's calculations also made an allowance for graduates who would not seek government employment and that the percentage of such graduates on an earlier occasion had been communicated as being 35 per cent). Secondly, he felt that an agricultural college could well

have more than 200 students and that no limit need be placed on the number of admission as long as corresponding facilities were there. Thirdly, an increase in the number of colleges during a temporary period of shortage could create a facility which might not be fully utilised in the long run. A teaching institution was not required for every zone as zones could be served equally well by regional research stations. The latter solution commended itself particularly as an agricultural university was being proposed for Maharashtra. The State Government's action would result in spreading out experienced teaching staff and in diluting standards of agricultural education. The Under Secretary expressed himself unambiguously against the opening of these two colleges and felt that the action of the State Government in proceeding with these schemes in the face of the clear advice to the contrary given to them by ICAR meant that planning was "used as a lever for supporting unplanned institutes" and created an awkward situation for the Central Government. He reinforced his line of argument with the observations of the Working Group on the formulation of the Fourth Plan to the effect that new institutions should not be set up in Maharashtra and suggested that the Planning Commission should be asked to advice what steps would be appropriate under the circumstances to discourage the State Government from embarking on this course. He did not in this note point out that these two schemes had been approved by the Working Group which considered the Annual Plan for 1965-66 just as the Dhulia and the Kolhapur colleges had been approved during the Annual Plan discussion earlier. It may be noted here that many of the important members of the Working Group for formulating the Fourth Plan which was against setting up new colleges in Maharashtra were members also of the Working Group for the Annual Plan 1965-66 which approved of the establishment of these colleges. In the meeting of the latter, no mention was made of the divergent approach of the former.

The Director-General agreed with this note and sent the case to the Secretary, Department of Agriculture. The Secretary, Department of Agriculture observed that the Central Government could deny central aid for unacceptable schemes and put up the case to the Minister who approved.

ICAR, in the meantime, thought that it should make an

effort to get at the real facts of the employment position of agricultural graduates. There had been a continuing conflict of opinion on this subject and different bases had been adopted for estimation by the State Government and ICAR. Accordingly, ICAR got information from the Ministry of Labour and Employment about the number of agricultural graduates on the live register in the employment exchanges in Maharashtra and found that this was 65 as on December 15, 1965. But this figure revealed little, for, according to the Statistical Officer in the Ministry of Labour and Employment, many graduates did not register themselves, while many of those that were on the live register could well have been employed already and yet kept their names on the register in the hope of bettering their prospects. As an exercise in the independent collection of statistics, this effort failed.

ICAR, however, did not seek to verify the manpower position by asking for the figures of vacancies for agricultural graduates. If it had, it would have discovered that the number of vacancies which was 433 in 1960-61 had risen to 835 in 1963-64 and to 1,258 in 1965-66. Neither did the State Government, when putting forward, justifying and explaining their proposals for additional colleges, furnish these figures to the Central Government. The State Government, moreover, did not consider the agricultural colleges merely as a means for providing manpower requirements for government departments. It considered them as a means for meeting the needs also of processing and chemical industries, seed technology and banking concerns. Last but not least, it viewed agricultural colleges as places, where farmers could be educated. The State Government considered agricultural education to be as important for farmers as general education was for the ordinary citizen and wastage in the former no more disastrous than wastage in the latter. In accordance with this view, the State Government offered special incentives to boys hailing from farming families for getting admission to agricultural colleges and later confined admissions to such boys. From this view was derived the State Government's emphasis on setting up colleges in different agro-climatic regions. But again these views were never communicated to the Government of India.

Nor did the State Government furnish the Government

of India with the statistics indicating the great demand for agricultural education. The statistics for the year 1965 for six colleges are given in Table 2.

TABLE 2

Name of college	Admission capacity	Applications received
1. Poona	200	561
2. Nagpur	200	538
3. Akola	200	506
4. Prabhani	150	466
5. Dhulia	55	247
6. Kolhapur	66	378
	871	2,696

The discussions on the State Government's Annual Plan for 1966-67 had by now become due and the Deputy Economic and Statistical Adviser who, in the Department of Agriculture dealt with plan co-ordination, suggested that, in these discussions, these two schemes should be excluded from the Annual Plan and that the financial assistance to the State should be calculated after excluding these two schemes. He also suggested that the Planning Commission should take up the matter with the State Government either formally or through their Programme Administration Adviser. Should the Minister care to talk the matter over with the Chief Minister during his next visit, he would be supplied with the brief by ICAR. It was decided that the matter be discussed at the time of the next Annual Plan discussions (for 1966-67). When these discussions took place, it was made clear by the representatives of Maharashtra that they could not accept the advice of the Government of India as they had already started the two colleges—one at Kolhapur and the other at Dapoli in Ratnagiri District, making a total of 8 agricultural colleges in the State. In view of this, the Working Group accepted the proposal of the Maharashtra Government and agreed to the amount of Rs. 44 lakhs proposed by it for this purpose. As a result, the total expenditure on agricultural colleges for Maharashtra in the Third Plan would be of the order of Rs. 152 lakhs as against Rs. 199 lakhs originally provided. ICAR did not expect, or accept, this conclusion.

On being communicated the results of this meeting, ICAR proposed to the Planning Commission that central assistance for these two colleges should be denied to Maharashtra as they had opened them against the advice of ICAR.

In the Planning Commission, where the file was received in January 1966, it was decided after discussion between the Member (Agriculture) and the Chief (Agriculture) that the whole question of higher education in agriculture should be discussed thoroughly in a meeting with the Ministry of Food and Agriculture. The meeting could not be arranged. On being reminded by the Department of Agriculture, the Chief (Agriculture) submitted the case again to Member (Agriculture) in October 1966, pointing out that new agricultural colleges should not be started in Maharashtra and that, in any case, no college would be approved for establishment until it had proper facilities. Member (Agriculture) suggested that the Planning Commission should support the stand taken by Secretary (Agriculture) who, however, could discuss the matter with the State Government again. He did not accept the suggestion that the Planning Commission might discuss the matter with the Chief Minister of Maharashtra in their forthcoming meeting. The Secretary, Agriculture was accordingly informed (in October 1966, *i.e.*, nine months after the receipt of the case by the Planning Commission) that central assistance for these colleges should be denied to the Maharashtra Government. It was suggested to him, however, that in the forthcoming discussions on the Fourth Plan, he might take up the matter again with the representatives of the State Government. By the time the case reached the Agriculture Department, these discussions had already taken place.

The papers now reached the Expenditure Co-ordination Unit of the Ministry of Food and Agriculture for taking action to deny central assistance to Maharashtra. This Unit pointed out that under the system in vogue, assistance was sanctioned only for major heads of development and not for individual schemes. Accordingly, claims for assistance were not received scheme-wise nor sanctioned scheme-wise. All that could be done was to advise the State Government not to include expenditure figures relating to these two colleges while sending statements of actual expenditure in support of their claims for assistance. ICAR wrote to the Maharashtra Government accordingly on

December 3, 1966.

The State Government replied, in January 1968, that the figures of estimated expenditure on these two colleges had already been included in the figures of expenditure under the head "Agricultural Production" furnished to the Centre on March 18, 1967 for the purpose of claiming assistance, which they pointed out was given for the head of development as a whole and not for particular schemes. Performance under "Agricultural Programmes" had been more than 100 per cent and would be more than 100 per cent, even if these two schemes were excluded. They were, therefore, in any case entitled to the full assistance claimed under this scheme.

No further action was taken by the Central Government on this question and, as far as this issue was concerned, the matter was closed.

It may, however, be mentioned that although the performance of the Maharashtra Government under "Agricultural Programmes" was more than 100 per cent for 1966-67, under "Agricultural Production", for which assistance is separately computed, it was not so. The actual position was as brought out in the table below :

TABLE 3

	Approved outlay 1966-67	Ceiling of central assistance		Anticipated expenditure	Assistance released	
		Loans	Grants		Loans	Grants
			(Rs. in Crores)			
Total Agricultural programmes	35.79	6.95	5.66	37.69	6.95	5.23
Agricultural Production	7.89	0.04	1.38	7.18	0.04	1.18

This table shows that under the head "Agricultural Production" a shortfall of 71 lakhs was anticipated. The performance, therefore, was less than 100 per cent and accordingly, the grant released was Rs. 20 lakhs less than the ceiling fixed. For "Agricultural Programmes" as a whole, the performance was more than 100 per cent but, even so, the entire grant assistance visualised was not released. In any case, the State Government received the assistance asked for on account of both these colleges and have continued to receive it since.

Annexure I

Arrangements in the Ministries of Food and Agriculture, Education and Health for discharging their roles in professional education

A. *Department of Agriculture* (*Agricultural Education*)

The function of coordinating and determining standards of agricultural education is discharged by the Department of Agriculture of the Government of India through the Indian Council of Agricultural Research. The Council lays down norms to be observed by colleges such as staffing pattern, qualifications of staff, teaching load, tenure, academic and research facilities, duration of the course, intake capacity, etc. The Council is only a registered society and, unlike the University Grants Commission, which is a statutory body, it has no powers to enforce these standards, except through financial grants. Till recently, there was no well-defined administrative arrangement by which these standards were enforced and inspected. The only device for exercising this financial power was the inclusion or exclusion of schemes in the plan, with no arrangements for prior inspection. Recently (in 1967) based on the recommendations of the Education Commission, ICAR has framed a policy whereby, along with the University Grants Commission, it will carry out quinquennial inspections of institutions imparting agricultural education.

B. *Ministry of Education* (*Technical Education*)

The functions enjoined by entry 66 of List I of the Seventh Schedule to the Constitution are performed by the Ministry of Education, in so far as technical education is concerned, through the All-India Council for Technical Education—an advisory body—established by the Government of India in 1955. This is the highest body entrusted with the task of coordination and determination of standards for higher education. The Council consists of various officials and non-officials and the Minister for Education is its Chairman. Secretariat assistance is provided by the Central Ministry. Once the guidelines are given by this Council, the administration, supervision and inspection of these standards, in so far as the departments in the Universities are concerned are undertaken by the University Grants Commission under the U.G.C. Act, 1956. In so far as the colleges of engineering and other allied fields are concerned, these functions are performed by the ministry itself.

Planning for development and expansion is first undertaken by the Planning Commission and the Central Ministry in consultation with the State Governments, taking into account the existing capacities and future manpower requirements. Once these are determined, the All-India Council for Technical Education lays down the standards to be followed by the colleges/Universities. The All-India Council for Technical Education has 4 Regional Committees in Northern, Eastern, Western and Southern Regions. The secretariat assistance to the All-India Council is rendered by four Regional Offices of the Ministry of Education. They assess the standards and requirements of various colleges and make recommendations to the Committtee/Council on the development of technical education, including the establishment of new institutions wherever necessary. The Regional Committees make their recommendations to the All-India Council. After these are considered by the Council, technical approval is issued by the Ministry to the institutions/State government concerned, followed by a financial sanction after the estimates for various items are received and scrutinised by the Ministry. The Regional Committees examine the progress made, inspect the standards of respective colleges/institutions and report to the Central Ministry. In so far as the Universities are concerned, once the All-India Council makes the recommendation, the detailed functions of conveying technical approval, financial sanction, and subsequent follow up of progress and inspection are performed by the University Grants Commission.

C. *Ministry of Health, Family Planning and Urban Development (Medical Education)*

The subject, Medical Education, appears as entry 26 in the Concurrent List in the Seventh Schedule to the Constitution in the following form :

(*i*) The medical profession and medical education.

(*ii*) The nursing profession and nursing education.

(*iii*) Pharmaceutical profession and pharmaceutical education.

(*iv*) Dental profession and dental education.

Norms are framed by the Medical Council of India which is a statutory body, established under the Indian Medical Council Act, 1956. Although this is the apex body for laying down

standards of medical education, the actual enforcement is done through the respective universities. The Medical Council, however, discharges the function of coordination and overall guidance. Recognition to colleges is given after the Medical Council has had them inspected. Similarly, there is a Dental Council which inspects Dental Colleges. As regards State plan schemes, the State Governments themselves examine and issue financial sanctions. The annual plan and the five year plans, however, undergo the usual drill of discussions in the departmental Working Group and the Planning Commission as for other sectors of activity, *e.g.*, agriculture, etc. There is also a Working Group on professional education training and research manned by experts and specialists in respective subjects to advise the Directorate-General of Health Services and Department of Health.

ANNEXURE II

Procedure for formulation of Plans and release of central assistance

Planning procedure

Preparatory work on a Five Year Plan starts about four years in advance of the commencement of the plan. The Planning Commission considers the general pattern of resources and outlay for the plan. It undertakes an examination of the state of the economy and an appraisal of past trends in production and rate of growth.

Working Groups at the Centre

In the meantime, Working Groups are formed for the various sectors like Agriculture, Irrigation, etc. The bigger and more important of them set up a number of sub-groups. The Working Groups consist of representatives of the Planning Commission and the Central Ministries concerned, including in the case of some groups, representatives from State Governments. Usually, the Secretary of the Central Ministry concerned serves as the chairman of a group. These groups are asked to review the progress of programmes and schemes in the current plan and formulate proposals for the ensuing plan, keeping a long-term view of development.

Working Groups in the States

At about the same time, when the Working Groups begin their work at the Centre, States are advised by the Planning Commission to constitute similar Working Groups. Working

Group procedures vary from State to State. But generally, each such group consists of senior officials, connected with the subjects allotted. Each group is charged with the task of examining proposals for the next plan in a specified area of developmental programming like Irrigation and Power, Agricultural Production, Fisheries, etc. The State Working Groups keep in touch with their central counterparts, as also with the concerned Central Ministries. In an attempt to produce as coherent and financially realistic a plan as possible, the proposals formulated by the various groups in a State are discussed individually by departments of Government and collectively by an Inter-Departmental Committee, constituted by the State. In some States, the proposals, as amended by the Inter-Departmental Committee, are submitted to a Committee of Members of the State Legislature or leading public men. A draft plan is thereafter formulated by the State Government and, in many States, got approved by the State Legislature before being submitted to the Planning Commission.

Annual Plans

After the finalisation of the Five Year Plan, it is broken up into annual plans or programmes and performance is judged in terms of the tasks executed on an annual basis. Around September each year, the Planning Commission indicates to the State Governments the more important objectives towards which the plan for the following year should be oriented and the provisional magnitudes of total outlay and central assistance for the forthcoming financial year and asks for their draft proposal within the framework of their approved Five Year Plan. They are also asked to send their proposals for raising additional resources for financing their plans in accordance with the broad targets of the Five Year Plan.

Formulation of State plan proposals

In order to appreciate the role of Central Working Groups, it is necessary to describe the manner in which State plan proposals are scrutinised by them at the time of plan formulation. Plan proposals emanate from the States. Within the limits of financial outlay indicated by the State Finance Department, technical officers in a State, in collaboration with their field officers, formulate schemes for inclusion in the plan. Except where prior technical scrutiny at the Centre has been laid down

(*e.g.*, major irrigation projects which have to be cleared by the Central Water and Power Commission and the Technical Advisory Committee of the Planning Commission before they can be included in the Plan), formulation of schemes is in general terms. These proposals are examined by the State Working Groups. Such of the proposals as are considered suitable are included in the Draft State Plan.

Centre's Scrutiny of States' Proposals

The whole set of proposals is received from the State in the Central Ministries concerned as well as in the Planning Commission, two or three weeks in advance of the Five Year Plan discussion. It is usual for the Central Ministries to refer the proposals to their technical divisions or agencies. Some Ministries send selected proposals for examination, while others associate representatives of their technical divisions or agencies with the Working Group discussions. Proposals and schemes are examined from the point of view of reasonableness, magnitude of financial outlay, production potential, past performance of the State, organisational and operational limitations and national needs. The concerned divisions in the Planning Commission examine the proposals from an overall angle. An examination of this type, although carried out in most cases by technical experts, is by no means the technical scrutiny which may have to be carried out before a scheme is taken up for actual execution. The examination by the Working Group is limited to testing, in a broad way, the practicability of the proposals and determining their *inter se* priorities in the context of available resources.

After the Annual Plan discussions, a summary record is prepared. This summary record is sent to the Planning Commission who, generally on the succeeding day, indicate the sectoral allocations, which mostly are below the levels indicated by the Central Ministries. In case of agriculture, the Planning Commission indicate approval of outlays under the group headings 'Agricultural Production (including agricultural research, education and extension)', 'Minor Irrigation and Ayacut Development', 'Soil Conservation'. 'Animal Husbandry and Dairying'. Forests', 'Fisheries' and 'Warehousing and Marketing'.

Copies of the summary record are sent to the State

Governments for information.

The summary record does not amount to Central Government's decision for all schemes and the outlays indicated against them. It only indicates a general approval of important schemes in respect of most of which, technical details have been already discussed between the Central and State authorities and some, for which such details are still to be discussed.

Mostly, the State Governments work out their final Annual Plans in the light of central assistance, indicated by the Ministry of Finance and the outlays approved by Planning Commission. This plan is, however, generally in the framework drawn up during Annual Plan discussions between the Ministries and the State representatives.

Inclusion of Schemes in the State Plan

Once schemes have been approved for inclusion in the State Plan, it is the responsibility of the State to execute them. No specific sanction or approval of the Centre is required except in certain cases enumerated in the next paragraph. After the plan discussions are over, the Planning Commission issues letters to the States, approving their Five Year Plans, the outlays on individual schemes and projects and the targets to be achieved.

Inclusion of new schemes in the middle of the year

If the State Government wants to take up a scheme in the course of the year, it has to seek the approval of the concerned Ministry and the Planning Commission, if it is a new scheme. In case it is a scheme within the approved pattern of schemes (*e.g.*, establishment of seed multiplication farms), then the State Government has not to seek prior approval from the concerned Central Ministry or the Planning Commission.

In the circulars issued by the Planning Commission during 1958-59 and 1960 to 1962, it was clarified that, for including any new scheme in the State plan or expanding the scope of any scheme beyond the approved level, approval of the concerned Central Ministry and Planning Commission should be sought by the State Government.

Measures to secure adherence to priorities fixed had been changing and the States were gradually allowed greater operational flexibility. In the First Five Year Plan, central aid was given as specific purpose grants. The rate of grant generally changed from year to year as also from scheme to scheme.

Even within a scheme, the rate was different for recurring and non-recurring expenditure. Every scheme had to receive technical clearance from the Central Ministry concerned or other central agency before the grants could be released. Assistance for one scheme could not be diverted to another.

Till 1958-59, central assistance was estimated, intimated and disbursed on the basis of scheme-wise patterns of assistance. The patterns served as the principal channel for sanctioning assistance to the States, the Central Ministries exercising a rigorous check on scheme-wise expenditure and a strict control over the release of funds. The main object of laying down patterns of assistance was to ensure adherence to the priorities laid down in the plan.

Patterns for State Plan Schemes

In 1958-59, this procedure was modified. Schemes were arranged in suitable groups under different heads of development like "Agricultural Production", "Minor Irrigation", "Land Development", etc. While the total amount of central assistance was to be estimated with reference to individual schemes and to the patterns of assistance applicable to them, the amounts to be paid to the States as assistance were to be related to the group of schemes mentioned above. Within a group, the State Government was free to regulate expenditure on the schemes. Where, however, the total expenditure under one group was proposed to be covered by reduction of expenditure in another group under the same head of development, the concurrence of the Central Ministry had to be obtained. When an adjustment involved more than one head of development, the concurrence of the Central Ministry had to be obtained. When an adjustment involved more than one head of development or more than one Ministry was concerned, the concurrence of the Planning Commission was necessary.

In October 1961, it was decided that, under each head of development, there would be only two groups, one comprising schemes for which there were specific patterns and the other including all the remaining schemes. Re-appropriation of provision from one group to the other could take place only after reference to the Central Ministries concerned while re-appropriation between different heads of development could take place in consultation with the Planning Commission.

From 1962-63 onward, these restrictions were further relaxed. In August 1962, loans and grants were to be intimated for each head of development as a whole, even though the amount in question was to be arrived at in the main on the basis of schemes for which patterns were provided. The State Governments were asked to ensure that the assistance granted under a head of development was utilised only for schemes carrying patterns. Adjustments in outlays under different heads would, as previously, require the concurrence of the Planning Commission or the Central Ministries concerned, as the case may be.

Notwithstanding the arrangement of schemes into groups and the procedure prescribed by the Planning Commission for the release of assistance with reference to groups, assistance released at the end of the year was with reference to heads of development and not with reference to groups. It will have been observed from the preceding paragraph that groups ceased to have much significance from 1962-63 onwards.

The procedure described above is not applicable to the loans given to State Governments for river valley projects like DVC, Bhakra Nangal, Rihand, Chambal, Nagarjuna Sagar, etc. Assistance for these projects is released by the Ministry of Irrigation and Power on the basis of quarterly progress of expenditure. The total amount of central assistance released during a year is of course subject to adjustment on the basis of "actuals". Towards the end of December each year, State Governments have to indicate to the Ministry of Irrigation and Power whether any adjustments in the loan assistance for these projects are called for on account of the actual physical progress in these projects.

On account of the continuing short-fall in agricultural production as a result of diversion of funds earmarked for agricultural programmes, the Centre, in December, 1963, laid down that with effect from 1963-64, central assistance under "Agricultural Programme" should be utilised wholly for schemes falling under this heading and would not be available for diversion to any other head. The head "Agricultural Programme" included the following heads of development :

(1) Agricultural Production
(2) Minor Irrigation
(3) Soil Conservation

(4) Animal Husbandry
(5) Dairying and Milk Supply
(6) Forests
(7) Fisheries
(8) Warehousing, Marketing and Storage.

If a State Government is unable to utilise the entire amount of central assistance allotted under any of these heads of development, it can effect suitable adjustments and use available funds for any other head of development mentioned above. If, however, there is a short-fall in actual outlay on "Agricultural Programmes" as compared with the approved outlay, the amount of central assistance will stand reduced to the corresponding extent. A similar restriction has been placed on the utilisation of central assistance for programmes of cooperative development.

Computation of assistance for State Plan schemes

Mention may be made here of the method of computing the final figures of central assistance for State Plan schemes. The central assistance of loans/grants intimated under a head of development to a State constitutes the ceiling of assistance for that particular head. If the expenditure incurred is not less than the outlay intimated for that head, the full assistance as intimated becomes due. If, however, the expenditure incurred falls short of the approved outlay, the assistance as intimated is reduced in proportion to the ratio that the actual expenditure under the head of development bears to the approved outlay. Simultaneously, on the basis of the total outlay on the State's plan schemes, the total assistance payable is worked out by reducing the total assistance promised in proportion to the ratio which the total expenditure incurred bears to the total approved outlay. If the total of the loans and grants due under the various heads of development falls short of the total assistance computed as above, the difference is given as a Miscellaneous Development Loan. If, however, the figure of Miscellaneous Development Loan thus worked out is less than the Miscellaneous Development Loan assured to the State, the latter amount is actually paid. The overall condition is that the total assistance given should in no case be less than warranted by the total outlay actually incurred on State Plan Schemes.

A feature of the Miscellaneous Development Loan is that,

excluding the assistance reserved for river valley projects, agricultural programmes and programmes of co-operative development, the balance of central assistance is available in full to a State provided the total outlay is attained. The only disadvantage of not achieving the target outlay laid down for a head of development is that the State loses a portion of the grant assistance earmarked for that head. In other words, in order to receive the entire central assistance assured for a year (excluding assistance earmarked for agriculture, etc.), all that is necessary is adherence to the total plan outlay; ceilings on outlay for individual heads of development can, if the State chooses, be ignored.

FORGING AN INDUSTRIAL PROJECT

RAM K. VEPA

This is the story of an industrial project from the time it was licensed in 1956 to the time it went into production in 1968—a long period of gestation during which its fate hung in the balance and was influenced by the actions of individual industrialists, corporations and governments.

One of the main characters in this narrative was DT, who rose on the Indian industrial scene like a meteor and whose fortunes waned just as quickly. The subject of this case study was one of the many projects which he handled during the period his fortunes were on the rise but the force of circumstances overwhelmed him and nearly put an end to the project. The other chief actor is not a person but an institution : APIDC[1], a State agency set up in 1961 to stimulate industrial development in Andhra Pradesh in the large and medium industries sector.

THE FIRST PHASE

The narrative begins on August 9, 1956 when a licence was issued by the Government of India to one SMH of Hyderabad for establishing a new industrial undertaking for the manufacture of steel forgings with an annual capacity of 4200 tonnes per annum. SMH, the chief promoter of the project was, according to information supplied to APIDC, a man "with 20 years' experience in the operation and management of engineering industries in U.K., Canada and U.S.A.". He was said to have set up and operated a fair-sized forging plant in a public sector enterprise at Hyderabad of which he was the founder, besides having experience of developing and running its Machine Tools and Small Tools manufacturing division for 15 years.

The licence, issued in 1956, was valid only for a period

[1]Andhra Pradesh Industrial Development Corporation.

of 12 months from the date of issue; in October 1956, the approval of the Government of India was accorded to the Capital Issue of Rs. 80 lakhs share capital, of which Rs. 60 lakhs was to be in equity and Rs. 20 lakhs in preference. A company under the name of Republic Forge Company (RFC) was incorporated on April 15, 1957 and for the next four years, efforts were made to negotiate suitable foreign collaboration for obtaining the know-how (and if possible, financial assistance) for the project. Not much is known about the happenings during this period nor are they of much relevance to the main trend of this case study; suffice it to mention that during this period, a Board was constituted with PSR as Chairman and consisting of retired Civil Servants and Industrialists. PSR himself was a senior Civil Servant who, after a distinguished career in the Indian Civil Service, had been Governor of a State and had also acted as Chairman of a large multi-purpose project. He was at that time also Chairman of another public sector company at Hyderabad. Another member, MAS, was a public servant of a princely State who, since Independence, had moved over to industry and had made a mark as Chairman and Director of many important companies. Two directors—one, an Indian (JHS) and the other a Frenchman (JMB) represented a foreign trading company—which was negotiating with the French industry for suitable collaboration terms. It was JMB who finally obtained a positive response from a well-known French company to provide the technical know-how to the project.

RFC applied to APIDC on October 7, 1961 for a loan of Rs. 30 lakhs and a guarantee for deferred payment for the machinery to be supplied by the French company (valued at Rs. 130 lakhs) to be repaid in 20 half-yearly instalments, the first instalment commencing 6 months after the last shipment of the machinery. The authorised capital of RFC was Rs. 125 lakhs in equity and Rs. 25 lakhs in preference though only Rs. 60 lakhs in equity and Rs. 20 lakhs in preference were issued but none subscribed. The company had, in addition, a promise from JMB that a French financial group would make available, Rs. 15 lakhs in French francs on an equity basis, while the French credit for deferred payment amounted to Rs. 126.11 lakhs. The total cost of the project was estimated to be Rs. 244.11 lakhs, of which Rs. 173 lakhs represented the investment on land

(Rs. 1.5 lakhs), buildings (Rs. 30.50 lakhs) and machinery (Rs. 141.00 lakhs). The promoters and associates were to contribute only Rs. 5 lakhs and the remaining Rs. 60 lakhs of share capital (taking into account Rs. 15 lakhs of the French investment) was to be raised through a market issue.

From information furnished to APIDC, it was learnt that the French offer was not accepted without considering at length alternative offers from elsewhere. There was an offer from U.S.A., which involved a capital outlay of Rs. 130.95 lakhs for a forge plant of 5000 tonnes but the capacity was to be attained only in two shifts. There was also an East German offer, which involved an outlay of Rs. 149 lakhs, while the French offer for a plant of 5000 tonnes in a single shift cost only Rs. 130 lakhs. There was the further inducement of deferred payments and the possibility of obtaining all the foreign exchange through credit, provided by the French government. There was also the possibility of equity investment of Rs. 15 lakhs from a French financial group which would not be available, if the offer from another country were accepted. The French company, whose offer was finally accepted, was a well-known public sector firm in France of more than 70 years' standing.

The project itself envisaged the manufacture of various types of forgings up to a weight of 120 kgm for automobiles, diesel engines, railway scooters, earth-moving and agricultural machinery. It was estimated that there would be a saving in foreign exchange progressively rising from Rs. 10 lakhs (in 1963 when the project was expected to go into production) to Rs. 50 lakhs in 1966. It would meet a portion of the estimated demand in the country for steel forgings of 100,000 tonnes per annum, of which only 30-40 per cent was at that time being met by indigenous production. It would employ about 500 personnel (both skilled and semi-skilled) and yield a return on the investment rising from 3.5 per cent in 1963, to 17.5 per cent in 1966. The company was awaiting government approval to the provisional agreement with the French company as also the clearance for the import of the machinery by the Capital Goods Committee of the Government of India. It had already secured an import licence worth Rs. 10 lakhs for the import of die steel, the necessary raw material for executing orders from customers. In November 16, 1961, the Capital Goods Committee of the

Government of India cleared the import of machinery for the project and in the same month, the Board of RFC was strengthened by the inclusion of two more experienced civil servants—VNR, a retired Comptroller and Auditor-General of India and RNB, a retired Chairman of the Union Public Service Commission.

The application from the company for a loan of Rs. 20 lakhs and a deferred payment guarantee for Rs. 130 lakhs was received by APIDC on October 7, 1961. The Board of APIDC was presided over by a non-official (PBR) and consisted of 18 members—both officials and non-officials, some of the latter being well-known figures in the industrial field. But few of them took any keen interest in the working of the Corporation and much of the decision-making was left to the Chairman and a few senior officials. The MD at that time was AD but his place was soon to be taken by GVR, a young and able officer who had had experience in the Steel Ministry of the Government of India. At the meeting of the Board on October 21, 1961, a note intimating the receipt of the application was placed before them. APIDC called for further particulars from the company on a variety of matters, such as a copy of the project report, copies of agreements, construction schedules, flow sheets, expansion programmes and marketing prospects. Discussions were also held by the Chairman, RFC with the Managing Director of APIDC, at which the latter suggested raising the share capital from Rs. 80 lakhs to Rs. 120 lakhs with increased contribution from the promoters themselves.

As a result of these discussions, the company raised the equity base to Rs. 90 lakhs with Rs. 75 lakhs in equity and Rs. 15 lakhs in preference. The promoters were to contribute Rs. 10 lakhs, Rs. 15 lakhs to be obtained from the French financing group, and the rest of the amount (Rs. 50 lakhs) would be by market issue. The preference shares were to be partly under-written (Rs. 10 lakhs) and the rest were to be obtained from the public. A revised application was made to the Controller of capital Issue on December 8, 1961 for permitting variation in the capital structure of the company. On December 30, 1961, the Board of APIDC endorsed the suggestion of the Managing Director to fix the share capital at Rs. 120 lakhs (of which Rs. 15 to Rs. 20 lakhs could be under-written by APIDC) and a guarantee

tee for deferred payments would be considered, provided three instalments were deposited with APIDC and MD of the company was appointed in consultation with and on approval by APIDC.

On January 11, 1962, RFC replied agreeing to increase the share capital to Rs. 120 lakhs but requested APIDC to invest directly Rs. 10 lakhs and to underwrite, in addition, Rs. 20 lakhs. The company also agreed to deposit two instalments and to appoint a Managing Director in consultation with APIDC. They, however, felt it somewhat derogatory to their dignity to await for the approval being accorded by APIDC. On January 27, 1962, the Board of APIDC agreed to underwrite Rs. 20 lakhs and to provide in principle the guarantee for deferred payments, subject to the approval of the State Government. APIDC was authorised by its articles of association to provide such assistance without any reference to the State Government since payments were to be made over a period of time and were within the resources, likely to be available with APIDC. But since the total liability (Rs. 130 lakhs) exceeded the paid-up capital of the Corporation at that time (Rs. 50 lakhs) and in view of the magnitude of the amount involved, and the fact that APIDC itself had just then commenced operations, it was considered prudent to inform the State Government and obtain their concurrence before providing the guarantee. It was also decided to take further action in the matter only after the Government of India had accorded approval to the deferred payment terms proposed by the company.

At this stage, the company ran into its first series of difficulties which were to pursue it for nearly 6 years. On April 10, 1962, JMB, who was negotiating with the French company resigned from the Board on the plea that the French group who had earlier agreed to invest Rs. 15 lakhs were no longer willing to do so and that an investment of Rs. 10 lakhs from other Indian friends also would not be forthcoming. He, however, agreed to continue negotiations with the French company for a final draft of the agreement. JHS, an employee of the same company as JMB, also resigned on the ground that SMH, the chief promoter was no longer willing to fulfill an agreement entered into between them, regarding the promotion and management of the company.

PSR, the Chairman of the company, wrote to the

French company directly on April 13, 1962 (the correspondence so far having been conducted through JMB) expressing his surprise at the turn of developments, particularly since JMB only a few days back had "clinked glasses" with him and MAS at Hyderabad after finalising all points of the agreement between RFC and the French company. In response to his request, the French company sent a draft of the final agreement in July 1962, a copy of which was forwarded to APIDC early in August. Meanwhile, the project was kept alive through periodic revalidations of the capital issue orders and the licence till the end of December 1962. In September 1962, the composition of the Board changed with the inclusion of CMK and HS to fill the vacancies caused by the resignation of JHS and JMB. It was also hinted by the Chairman, PSR (in a communication to APIDC) that the main promoter (SMH) himself was likely to leave the Board although no reason was adduced for such a surprising development. Since all formalities had been completed, the Board of APIDC at its meeting on August 13, 1962 authorised MD to obtain the approval of the State Government for the deferred payment guarantee. A letter was sent to the State Government on August 24, 1962, outlining full details of the project and the action proposed to be taken by APIDC.

Meanwhile, it had come to the notice of APIDC that the French company had entered into an agreement with another party called the "Hindustan Forge" for setting up a forge plant (similar to RFC) at Hyderabad. The Board of APIDC was somewhat puzzled by this information, since it was considered unlikely that their French collaborators would be negotiating simultaneously with two parties at the same location and suggested that MD, APIDC obtain a clarification from the Director of Industries, Andhra Pradesh, or from the French company itself. The former confirmed that a licence was being sought by a party for manufacture of steel forgings with a capacity of 9000 tonnes per annum on the strength of a collaboration with the French group. The reply of the French company to APIDC was revealing; it confirmed that they had signed an agreement with a group under the name "Andhra Forge and Structurals". After lamely explaining that they had considered more than one plant was feasible in a large State like Andhra Pradesh, the

company confessed to being in "the same position as you and do not know in fact what to do".

The Government of India accorded their approval on October 22, 1962 to the collaboration agreement between RFC and the French company but on November 1, 1962, the State Government, in a communication to APIDC, regretted their inability to accord their concurrence to the proposal of APIDC to provide a guarantee for deferred payments. The decision of the State Government was communicated to RFC on November 8, 1962, and the Board of APIDC at its meeting on December 22, 1962 merely noted the decision of the Government. The letter from the Government adduced no reasons for its decision which was completely at variance with the general trend of the discussions so far held between APIDC and RFC. From information provided subsequently by the Government to the Public Accounts and Estimates Committees of the State Assembly, it became clear that the management of the company, and, in particular, the credentials of the chief promoter, SMH, did not inspire sufficient confidence in the Government to permit its agency to undertake so large a risk. It was for this reason, that, in September 1962, the Board of RFC had hinted that SMH was likely to leave the Board—although even this gesture did not alter the decision of the Government. It was also rumoured that the personal relationship between the Chairman of RFC and the CM of the State were somewhat cool and this might have been responsible for the final decision. The internal dissensions of the Board of RFC, leading to the resignation of two important directors undoubtedly played some part in the final decision taken by the Government.

Whatever the reasons, the first phase of the project ended with a categorical and unambiguous rejection by Government of the proposal made by APIDC. What is interesting, however, is the fact that although discussions were going on for a year between APIDC and RFC, none of the Government directors on the Board (including senior officials from the Secretariat) seemed to have been fully aware of the Government's attitude in the matter. A new Government had come into office in April 1962 after the general elections headed by a person who (though belonging to the same party) had views different from those of his predecessor and this was generally considered the

reason for the somewhat abrupt change in the Government attitude. In fact, a few months later, Government accorded approval to a somewhat similar proposal from APIDC but involving a different set of people...but that is running ahead in the narrative and belongs logically to the next part.

THE SECOND PHASE

A new phase of the project began with a letter dated March 20, 1963, from BHR who had meanwhile taken over as Managing Director of RFC. BHR was a business man who had connections with the ruling political party. Although the company was technically the same in name, it had undergone a complete transformation with all the Directors of the previous Board (except the Chairman) having resigned. The new promoters were willing to find Rs. 15 lakhs amongst themselves, out of which Rs. 7.5 lakhs was subscribed initially by them. The collaboration agreement finalised earlier with the French company was accepted with the modification of a slight reduction in the price of machinery by 2.725 per cent since the Government of India had made this as a precondition for the issue of import licence and the allotment of French credit to the project. In the letter of March 20, 1963, BHR intimated APIDC that the guarantee for deferred payments was to be provided by the latter to the French company by May 5, 1963 at the latest, beyond which date there was likely to be an escalation of the costs at least by 12 per cent.

The Board of APIDC at a meeting held on March 23, 1963 considered the request of BHR and in view of the change in the management of the company recommended to the Government for a reconsideration of their earlier decision. In April, 1963, PSR tendered his resignation as Chairman and DT was elected as Chairman on April 10, 1963. The State Government were then requested by APIDC to convey their approval to the proposal made by the Board regarding the deferred payment guarantee and, in less than two weeks, the Government communicated their approval, subject to certain conditions. (*i*) A nominee of APIDC (preferably a senior officer of the Industries Department) should be on the Board; (*ii*) the share capital to the extent of Rs. 120 lakhs should be raised *prior* to the guarantee becoming effective; and (*iii*) the machinery

proposed to be imported should be hypothecated to APIDC.

The primary reason for the change in the attitude of the State Government was the association (as Chairman) of DT who had risen on the Indian industrial scene with astonishing speed and had, in fact, promoted a shipping company with credits obtained from Japan and other countries. The Government of India also had provided a loan of Rs. 2 crores to DT for this purpose and in addition DT (himself a native of Andhra Pradesh) was negotiating with the State Government for a thermal project at Ramagundam for generating 200 MW of electric power. The reputation of DT was indeed high at that time and the State Government, therefore, felt that with him as Chairman of the Board, it would be possible to support it by permitting APIDC to provide the guarantee for deferred payments.

On April 24, 1963, the Board of APIDC noted the Government's approval and authorised the Managing Director to execute the guarantee, provided the conditions laid down by the Government and the Board were acceptable to the company. This was communicated to the company on the same date and RFC in a letter written by DT himself on the same day, agreed to the conditions but pointed out that since the prospectus for going to the capital market could not be issued until the agreement with the French company was finalised and since they were insisting on the production of a guarantee letter by May 5, 1963, it was necessary for APIDC to issue the guarantee immediately. DT, however, undertook to make the capital issue of Rs. 120 lakhs for RFC before December 31, 1963, out of which Rs. 15 lakhs (according to him) had already been subscribed. The matter was again referred to the State Government on April 25, 1963 and the State Government clarified four days later that it was not the intention of the Government to stipulate that the entire capital of Rs. 120 lakhs was to be collected before the guarantee became effective and that the Corporation could furnish the guarantee by May 5, 1963. The State Government, however, desired that in the agreement to be entered into between APIDC and RFC, it might be stipulated that a substantial portion (more than 50 per cent) should be raised within a reasonable period (6 months) and that all the fixed assets raised out of it should be pledged to the

Government in addition to the machinery already pledged under the guarantee. It is significant to note that the stand of the State Government had changed considerably from their earlier approval which had categorically stipulated that the guarantee was to become effective only after the entire share capital had been raised. The clarification provided by the State Government virtually amounted to a fresh decision and this change in the Government stand was vigorously opposed by the Chairman of APIDC. The words, substantial and reasonable, were vague, and the reference to machinery being pledged to Government was obviously a mistake since in any case they were to be pledged to APIDC, and not to the Government.

The Board of APIDC considered the matter on April 29, 1963 and approved the terms and conditions under which the guarantee was to be provided. A letter was issued on May 2, 1963, intimating that a formal letter of guarantee would be issued on receipt of the unconditional acceptance of the terms and conditions outlined in the letter. On the same date, RFC accepted the terms and conditions and the guarantee was signed on May 2, 1963 in favour of the French company for a sum of 17,279,996.74 NF corresponding to Rs. 178 lakhs, out of which Rs. 130 lakhs represented the principal and Rs. 48 lakhs represented the interest to be paid in 20 instalments at a bank designated by RFC, provided the entire plant and machinery, appliances, accessories as described in Part I of the agreement dated July 31, 1962 between RFC and the French company have been delivered by them. Simultaneously, BHR and SR (two directors of RFC) signed indemnity Bonds to cause the company to "duly and punctually meet all its obligations to the French company and to be jointly and severally bound to the Corporation for the payment of instalments paid by the Corporation." On an enquiry from the French Embassy, the State Government further clarified that APIDC was a Government agency and such guarantees were not directly furnished by the State Government but since the guarantee in this case was provided by APIDC with the specific approval of the State Government, it was tantamount to a counter-guarantee, a position which was accepted by the French Embassy.

The production of a guarantee for deferred payments

raised considerable internal complications within APIDC itself. The Chairman of the Corporation (PBR) was a Member of the Legislative Assembly and belonged to a political group in the ruling party opposed to the Chief Minister. He held strong views about the undesirability of providing such a guarantee. The result was that PBR's term as Chairman was declared completed (since he refused to resign voluntarily) and AVB (an MLA belonging to the Ministerialist group) was appointed in his place. At a meeting of the Board of APIDC held on June 25, 1963, an amendment was made to the minutes of the Board meetings of April 29 and 30, explaining that the security demanded from RFC was more than adequate to cover the liability, arising out of the guarantee, which was estimated to be Rs. 130 lakhs. This was to meet the criticism of the *ex* Chairman of APIDC (PBR) that the guarantee was being provided on inadequate security and that the Government and APIDC did not exercise sufficient prudence in doing so.

In October 1963, APIDC wrote to RFC reminding them that the period of 6 months for raising the entire share capital of Rs. 120 lakhs would expire on November 2, 1963 and also asking them to take steps to amend the Articles of Association of the company for the nomination of a non-rotational Director representing APIDC and to appoint the Managing Director of the company in consultation with the Corporation. On October 31, 1963, RFC replied stating that though APIDC had provided a guarantee on May 2, 1963, it was accepted by the French company only on October 17, 1963 after a lapse of more than 5 months and hence the guarantee had come into force only on that date. Consequently, RFC requested an extension of time by 6 months and promised to go to the capital market around March, 1964. Regarding the Managing Director, it was pointed out that the Corporation was aware at the time of the negotiations of the appointment of BHR as MD, RFC. They therefore requested formal ratification of his appointment. They also promised to convene an extra-ordinary General Body Meeting of the company to fulfil the condition regarding the appointment of a non-rotational director as a nominee of APIDC.

The State Government which was already sensitive to the criticism in the Assembly and in the Press on the

issue of guarantee to RFC reminded the Corporation frequently as to the steps being taken by RFC for the collection of the share capital. The Board of APIDC at a meeting held in December 1963 approved the grant of extension of time till May 1964, provided that Rs. 15 lakhs was deposited by the promoters, out of the contribution to be made by them before March 1964. It also approved the appointment of BHR as MD. A senior Civil Servant who was the Secretary of the Industries Department in the Secretariat and Deputy Chairman of APIDC was nominated to the RFC Board on January 3, 1964 as a nominee of APIDC which was indicative of the importance that was attached to the operations of RFC. He was, however, coopted as a Director only on April 23, 1964 and the Company Law Board approved the appointment on July 8, 1964. It thus took nearly 15 months after the issue of the guarantee of APIDC for its representative to be co-opted on the Board of the Company. On January 22, 1964, RFC requested APIDC to waive the conditions of the deposit of Rs. 15 lakhs and to grant time unconditionally till May 2, 1964 for raising the share capital. This was, however, not accepted by the Board of APIDC, who reiterated their earlier decision. The State Government, in a letter dated February 13, 1964, while according approval to the extension of time by 6 months also desired that the condition regarding Rs. 15 lakhs deposit should be strictly enforced.

The discrepancy between the date of issue of the guarantee (May 2, 1963) and the date of acceptance of the guarantee by the French company (October 17, 1963) gave rise to a controversy between APIDC and RFC which was to go on for more than two years. APIDC contended that the guarantee commission of 1 per cent was to be charged to the company from May 2, 1963 and that this should be paid in advance every half year. The Board of RFC, however, maintained that the guarantee commission was payable only from October 17, 1963—the date on which the guarantee became effective and that no advance payment was stipulated at the time of providing the guarantee. On April 3, 1964, the Board of APIDC noted the request of RFC regarding the deposit of Rs. 15 lakhs but did not agree to waive it. On May 6, 1964, MD of RFC (BHR), who had been away in France earlier, addressed a letter to the Corporation requesting for further time till September

1964 in view of the dull condition of the capital market and also regretted his inability to deposit Rs. 15 lakhs (as suggested by APIDC) since the amount was required for carrying on the work of the company. He reiterated the earlier stand of RFC regarding the payment of guarantee commission from October 17, 1963 but promised to make such payments in advance in future. The Board of RFC, meanwhile, was expanded to include MTR (a prominent MP from A.P.) Prince MJ, the grandson of the then Nizam of Hyderabad (and currently Nizam of Hyderabad) KLNP, a well-known Industrialist of Vijayawada and GN who was a relative of DT, the Chairman of the Board.

On May 30, 1964, APIDC wrote to the Reserve Bank of India (RBI) for ratifying the foreign payment guarantee given earlier and also to advise the Corporation on the rules and procedures under which such guarantee should be given. This was caused by a realisation on the part of the Corporation that it had given a guarantee for foreign payments without appropriate authority from RBI. The letter was personally taken by the Accounts Officer of the Corporation to Bombay and subsequently APIDC reminded RBI who informed APIDC in a telegram that the action of APIDC in furnishing the guarantee without approval of RBI was not approved; but, since the guarantee had already been furnished, it was willing to allow the guarantee to stand as a special case. In a post copy of the letter, RBI requested the Corporation to refund a sum of Rs. 3.50 incurred by it on sending the telegram—an interesting commentary on the needless insistence on petty details, characteristic of most Government organisations in India but certainly out of place in an institution of the stature of RBI.

On July 19, 1964, the Board of APIDC reviewed the position regarding the inability of RFC to raise the share capital by May 2, 1964 and the intimation given by RFC that they could go to the capital market only by about September, 1964. While agreeing to grant this time, the Board of APIDC, however, again insisted that a deposit of Rs. 15 lakhs should be made with the Corporation as was suggested earlier. As regards the guarantee commission, the Board reiterated its earlier stand that the Commission was payable from May 2, 1963 and also suggested that Government might be appraised of the position. Meanwhile, the Accountant-General, Andhra Pradesh, who had

audited the accounts of APIDC brought to the notice of the Corporation on June 3, 1964 that the guarantee provided to RFC was made effective even though many of the conditions, such as the collection of share capital and deposit of Rs. 15 lakhs was not fulfilled. The capital structure of the company (RFC) was altered and the share capital refixed at Rs. 147.6 lakhs (Rs. 112.6 lakhs in equity; Rs. 35 lakhs in preference) and Rs. 2.4 lakhs was issued for consideration other than cash.

On September 8, 1964, the Board of APIDC again considered two points—one of which related to the raising of the share capital and the other to the non-payment of the guarantee commission. It was pointed out, during this Board meeting, that the statement made by the Chairman of RFC (DT) on April 24, 1963 that Rs. 15 lakhs had been already subscribed at that time was not correct and that, in fact, the capital subscribed on May 2, 1963 was only Rs. 7.297 lakhs, and on March 31, 1964, the subscription in the Balance Sheet stood at Rs. 8.957 lakhs

On August 23, 1964, RFC wrote to APIDC that the French company were proposing to supply new machinery said to be more viable, efficient and modern. The company had originally wanted an increased cost of Rs. 8 lakhs but agreed to supply the machinery at the old price, on the persuasion of RFC. The Government of India had already approved the revised list, and the formal approval of APIDC was sought. On August 26, 1964, the Board of APIDC expressed great concern at the slow progress of the project. It was felt that any proposal for expansion at this stage, as was being suggested by DT, would only serve to delay the implementation of the project by at least two years and hence it was not acceptable to the Corporation. The Board also pressed for the deposit of Rs. 15 lakhs and the payment of the guarantee commission. It also advised MD, APIDC (GVR) that the legal aspects of the guarantee might be examined to "consider proposals for taking action in case of a breach of contract by RFC". This was the first indication that APIDC apprehended that there might be a breach of contract by RFC, in which case its own guarantee to the French group might become operative.

A letter was accordingly sent to the Legal Adviser, TL on October 20, 1964 to advise on the remedies available to the

Corporation in view of the non-fulfilment of the conditions, regarding the raising of the capital and non-payment of the guarantee commission, and the steps to be taken to enforce the contract in view of the Indemnity Bond, executed by RFC and its directors. A strongly worded letter was written on December 4, 1964 to RFC by APIDC, pointing out several breaches of agreement, the most important being the non-payment of the guarantee commission and the delay in raising the capital. It also pointed out that this was causing great embarrassment both to the Corporation and the Government and it hoped that suitable steps would be taken to show better progress in respect of the project. In response to this letter, RFC made an "on-account" payment of Rs. 1.7 lakhs towards the guarantee commission for one year but no reply was given on the other points.

On March 6, 1965, RFC requested APIDC for issue of an amended guarantee in view of the revised list of machinery which was less than the previous list by roughly Rs. 10 lakhs. In another letter, dated March 16, 1965, RFC requested that they might be allowed to deposit only the money due on two instalments instead of three as suggested by APIDC to enable the company to meet additional import duties on plant and equipment, amounting roughly to Rs. 10 lakhs. The company also wanted a written confirmation from APIDC of its willingness to underwrite Rs. 20 lakhs. Meanwhile, the State Government reminded the Corporation on March, 10, 1965 on the nonfulfilment of the conditions laid down by it before agreeing to the guarantee being provided by APIDC. On March 23, 1965, the Board of APIDC considered the request of RFC and decided to agree to release one instalment out of the three insisted upon by it for meeting the capital expenditure towards the close of the project and to issue a confirmatory letter for underwriting Rs. 20 lakhs. The Legal Adviser of the Corporation was also requested in a letter on March 31, 1965 to advise the Corporation on the amendments necessary to be made in the Indemnity Bond, executed by the directors of RFC, in the event of an amendment to the guarantee.

On March 23, 1965, the Board of APIDC noted that changes had been made in the list without the prior consent of the Corporation and advised the company not to effect any changes without first obtaining the concurrence of the Corporation.

On April 1, 1965 NIDC[2] was requested by APIDC to examine (from the technical point of view) whether the revised list of machinery being offered would be more economical than the previous list, as claimed by the French collaborators. RFC replied on April 8, 1965 that the first shipment of machinery was due to arrive in two days and that the bill of lading would not be released, unless an amended guarantee was issued. The Corporation, however, was awaiting the opinion of the Legal Adviser and NIDC, before taking any action on the amendment of the guarantee.

MD, RFC (BHR) wrote an important letter to APIDC on April 19, 1965 pointing out the difficulty in the deposit of Rs. 15 lakhs and the advance payment of the guarantee commission. After recapitulating that the present Board of RFC had inherited a derelict company and the numerous steps it had taken to rehabilitate it, he pointed out that they were racing against time since machinery had already started arriving and would attract demurrage, if not cleared immediately. It was, the letter stated, a "matter of life and death" for the company. The letter ended on an ominous note that if, in spite of all these explanations, the Corporation was not willing to waive its conditions, it expressed inability to carry on with the further implementation of the project. It went on to say : "The present Board of Directors would only be too glad to resign and step aside, if the Corporation comes forward to take over the project from now on as an alternative. From our point of view, it is immaterial whether we do the project or the Corporation does. Our only desire is that this important industrial unit should be successfully established, particularly because Andhra Pradesh is deplorably lagging behind other States in the industrial field". This was the first indication from the Board of RFC that they might be unable to implement the project and that they would be willing to hand over the management of the project to the Corporation. This was because the fortunes of DT had taken by then a turn for the worse and the shipping company which was the main base of his operations in India was unable to meet its own credit requirements. DT had earlier negotiated with the A.P. State Electricity Board to set up a Thermal Project of

[2]National Industrial Development Corporation.

200 MW capacity at Ramagundam on a novel "pay-as-you-earn" basis. But due to the difficulties encountered by the shipping company, the project had to be practically abandoned. The letter from BHR, therefore, reflected the increasing diffidence of the promoters to be able to raise the necessary finances for the implementation of the project.

On April 19, 1965, the Board of APIDC met to consider the letter from BHR. It sensed that a crisis was developing in the affairs of the company and that quick action might be required by the Board of APIDC to save the project. A sub-committee was constituted consisting of VKR, MAA, NBP and GVR to meet at frequent intervals to consider the action necessary to be taken on each occasion. On April 30, 1965, the sub-committee met for the first time to consider the letter of that date from BHR requesting for unconditional acceptance of the two instalments of deferred payments as security deposit and to issue a confirmatory letter for underwriting Rs. 20 lakhs of equity. On the same date, the Legal Adviser (TL) expressed the view that it was not desirable to issue the amended guarantee, unless the French company concerned specifically made a request for this purpose. He also raised the question whether the Government was a co-surety, besides being a co-guarantor. Any alteration in the terms of the original agreement, according to him, without the consent of the Government had no validity. The sub-committee of APIDC at its meeting held on April 30, 1965 decided to accept surety for a sum of Rs. 40 lakhs till such time that the two instalments of deferred instalments and cash deposits were made. It also stipulated that the directors and the associates should fully pay up the subscribed capital of Rs. 40 lakhs by September 1965 and that the guarantee commission should be paid in advance as half-yearly instalments in future. It also authorised MD, APIDC to obtain the approval of the Government for these conditions and to issue a confirmatory letter for Rs. 25 lakhs after the above conditions were approved by the Government and accepted by the Company.

On April 20, 1965, the French company wrote a letter to APIDC requesting formally for the issue of the amended guarantee which met the first objection of the Legal Adviser. On the same date, RFC wrote to APIDC informing that

IFC[3] had approved to underwrite Rs. 20 lakhs in equity and Rs. 10 lakhs in preference, provided the promoters raised the subscription to Rs. 35 (or Rs. 40) lakhs and the Board was also reconstituted. Other financial institutions like IDBI[4], ICICI[5] and LIC[6] were also expected to follow the lead of IFC. In pursuance of this advice, the Board was reconstituted to include some prominent industrialists of Bombay and Madras. The first consignment of machinery arrived at Bombay on April 14, 1965. Contracts for the construction of factory buildings valued at Rs. 13 lakhs were awarded and tenders for the rest of the civil works estimated at Rs. 12 lakhs were called for in May, 1965. Orders for indigenous machinery were placed on March 9, 1965 worth Rs. 9 lakhs and another order for Rs. 8 lakhs was yet to be finalised. On April 27, 1965, NIDC replied approving generally the revised list as being modern, efficient and more suitable for the production envisaged, than the original list. It also suggested deletion of certain equipment required for the project. In respect of a few items, it assessed the prices to be slightly overcharged by RFC but the variation was as little as 4 per cent, On receipt of the approval of NIDC, a letter was sent to the State Government on May 14, 1965, seeking approval of the conditions stipulated by the sub-committee on April 30, 1965.

On June 25, 1965, DT wrote a letter to the Chairman of APIDC, requesting his concurrence for a *pari passu* charge to the institutions, willing to give loan to RFC. Since the total value of the assets of the company were valued at Rs. 360 lakhs as against the guarantee liability of Rs. 165 lakhs, the letter said it should be possible for APIDC to limit itself to half interest on plant and buildings. On July 2, 1965, APIDC wrote to the Government, enquiring whether the Government also undertook to be a co-surety in favour of RFC for the guarantee and on July 29, 1965, it requested them to furnish copies of their correspondence with RFC, the French company and the French Government to determine whether any counterguarantee had been furnished by the Government.

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[3]Industrial Finance Corporation of India.

[4]Industrial Development Bank of India.

[5]Industrial Credit and Investment Corporation of India.

[6]Life Insurance Corporation of India.

On August 28, 1965, RFC wrote to APIDC informing that IFC had agreed to provide a loan of Rs. 40 lakhs and to underwrite only Rs. 5 lakhs. It was also intimated that the share capital was being reduced to Rs. 120 lakhs (Rs. 90 lakhs equity, and Rs. 30 lakhs preference). The letter also made a reference to the other requests made by RFC which were pending approval of APIDC such as the underwriting of Rs. 20 lakhs, issue of an amended guarantee, and the acceptance of a *pari passu* charge by APIDC with other financial institutions. It also referred to the condition of Rs. 50 lakhs to be raised by the promoters and the deposit of the shipping company shares held by DT to an extent of Rs. 60 lakhs. While accepting the terms and conditions, it requested the Corporation not to press for the fulfilment of them. On September 1, 1965, MD of RFC (BHR) wrote again that the project cost had gone up to Rs. 319 lakhs and that the State Finance Corporation (SFC) were being approached for a loan of Rs. 20 lakhs, besides Rs. 40 lakhs which IFC had agreed to give. On September 2, 1965, APIDC sent RFC a copy of the mortgage deed to be executed, hypothecating the assets of the company in return for the deferred payment guarantee already provided by it.

On September 13, 1965, MD, RFC (BHR) addressed a letter to the Prime Minister requesting him to take "appropriate" action for commissioning the project immediately for manufacture of defence items, in view of the conflict on the Indo-Pakistan border. Copies of these letters were sent to the Minister for Finance, Government of India, Minister for Defence and the Ministry for Industry as well as to the Chief Minister of A.P. Nothing, however, happened in response to this letter, since the cease-fire took place almost immediately.

On October 1, 1965, RFC informed APIDC that DT (the Chairman of RFC) was agreeable to deposit Rs. 50 lakhs worth of shares in a shipping company in lieu of the cash deposit of three instalments of deferred payments. On November 6, APIDC wrote to RFC and the French collaborators, suggesting minor changes in the amendments to be issued and also stipulating the payment of guarantee commission in advance every half year and the execution of the revised indemnity bonds. It also wrote to the Government, seeking approval for the issue of the amended guarantee, once these conditions

were accepted by RFC which it did on November 10, 1965. The question of raising funds to meet the customs dues for the release of machinery was discussed by RFC at a meeting held on November 9, 1965. MD (of RFC) intimated that a loan of Rs. 4 lakhs was proposed to be raised without prejudice to the first charge held by APIDC. Similarly, a loan from a commercial bank was also being negotiated on the hypothecation of the raw material stocks and spares.

On November 13, 1965, APIDC again addressed a letter to the Government seeking orders specifically on (i) accepting Rs. 60 lakhs worth of shipping company shares as security in lieu of cash deposit (ii) accepting Rs. 10 lakhs cash deposit by raising the share capital from Rs. 150 lakhs to Rs. 160 lakhs and (iii) agreeing to a *pari passu* charge with IFC for a loan of Rs. 40 lakhs. It is significant that while RFC was intending to reduce the share capital from Rs. 150 to 120 lakhs, APIDC was insisting on its being increased by a further amount of Rs. 10 lakhs. Meanwhile, the project had to face fresh difficulties. LIC communicated on November 1, 1965 their rejection of the request for under-writing Rs. 10 lakhs in equity and Rs. 10 lakhs in preference. On November 23, 1965, it was estimated by RFC that an amount of Rs. 16.87 lakhs was required to meet urgent commitments, including Rs. 9.5 lakhs for customs dues and demurrage (which was accruing at the rate of Rs. 1,000 per day) freight and incidentals (Rs. 2.5 lakhs), civil works and structural work (Rs. 3 lakhs), machine tools (Rs. 2 lakhs), etc.

On December 6, 1965, BHR, (MD, RFC) wrote to APIDC informing that ICICI had turned down the request for underwriting and that LIC were not prepared to reconsider their earlier decision. The position did not improve, although seven members of Parliament from Andhra Pradesh met the Minister for Defence, Government of India, at Delhi and requested that the industry which was defence-oriented should be supported by the Government. Meanwhile, the bulk of the machinery had been received and civil works were progressing, although not at a fast pace. On December 15, 1965, RFC estimated that Rs. 11 lakhs would be required to start the tool room and Rs. 25 lakhs for starting limited forging production with 2 hammers of 500 and 1000 kgs. To meet immediate

commitments, RFC requested APIDC to participate directly to an extent of Rs. 5 lakhs from out of the under-writing commitment of Rs. 20 lakhs.

The sub-committee of APIDC constituted to deal with RFC matters met on January 5, 1966 to discuss the precarious financial position of RFC, particularly in view of the machinery having arrived at the Bombay Port. The possibility of another Public Sector Undertaking, taking over the project was considered but it was felt that the immediate need was for APIDC to step in and to take charge of the project so that demurrage would not accrue on it. It was considered that, after APIDC had taken charge of the project, it could adopt one of three alternatives :

(*i*) induct a new entrepreneur into the project ;

(*ii*) transfer all the machinery to another Public Sector Undertaking;

(*iii*) or transfer some of the machinery to the Undertaking and retain the rest for running a reduced project.

It was suggested to BHR who was present at the meeting that six of the existing directors (including DT) should resign forthwith to enable them to be replaced by the nominess of APIDC. It was made clear that no further assistance could be expected from APIDC until these conditions were complied with. It was estimated that a sum of Rs. 56.75 lakhs would be required to meet charges on construction, demurrage, freight clearing which could be obtained as a temporary advance from the banks on hypothecation of the existing assets.

On January 25, 1966, MD, RFC informed the sub-committee that DT was willing to resign and that no tangible progress had been made in raising further amounts. The sub-committee thereupon impressed on him the urgency of the matter. On February 3, 1966, MD, RFC again informed APIDC that the promoters of the project were unwilling to contribute any sum beyond the Rs. 16.25 lakhs, already paid by them in view of the unhelpful attitude of the financial institutions. He pointed out that a sum of Rs. 20 lakhs was urgently needed to take delivery of the machines (Rs. 6 lakhs) to pay the freight and demurrage charges (Rs. 6 lakhs) and to clear outstanding bills to the contractors (Rs. 8 lakhs). He also suggested that APIDC might provide Rs. 20 lakhs

directly, which it had already agreed to underwrite. In reply to this request, the sub-committee of APIDC suggested on February 7, 1966, that before the matter could be considered, RFC should take steps to issue forfeiture notices in respect of the share-holders who were in arrears, make a further call of 25 per cent, coopt sufficient number of nominees of APIDC to form a majority and also coopt VKR, a nominee of APIDC on RFC Board as Joint Managing Director. These terms were the first concrete conditions put forth by APIDC for taking over the project, since it began running into difficulties.

On February 16, the Board of APIDC was appraised of the further developments that had taken place since its last meeting in December. The Legal Adviser of APIDC (TL) had expressed the view that since the revision of the list of machinery was made without the specific concurrence of APIDC, it would be justified in taking the stand, that the guarantee was no longer valid. While the Board was inclined to accept the legal opinion, it was of the view that it would not be expedient on grounds of public policy to repudiate the original guarantee given to the French company, irrespective of the validity of the counter-guarantee by RFC and its original directives. It, however, felt that the matter should be negotiated further with RFC before issuing an amended guarantee to them. It was considered desirable that the first instalment due in May 1966 should be postponed for sometime. The Board also ratified the decisions of the sub-committee and awaited further action from RFC and suggested that the State Government may meanwhile be informed of the developments.

The opinion furnished by the Legal Adviser was reinforced by the Advocate-General, whose opinion was also sought in the matter. His view point was clear and categorical : it was that "unless for reasons of policy, APIDC is particularly keen on restating its guarantee, it was in no legal obligation to restore it. The original guarantee came to an end with the operation of the original contract". In view of the opinion, expressed by the Legal Adviser as well as the Advocate-General, this decision by the Board of APIDC marked a distinct watershed in the entire case study. It accepted clearly and unambiguously, for reasons other than purely technical, the responsibility cast on it as a result of its having furnished the

guarantee to the project.

On February 23, 1966, APIDC wrote to the Government, seeking specific instructions, whether, in view of the legal opinion it should repudiate the guarantee or whether on grounds of public policy, they should renegotiate with RFC for post-ponement of the first instalment. They also wished to know what further steps should be taken in implementing the project. They also sought specific instructions whether the control of the project should be taken over by APIDC and whether, in the absence of a suitable entrepreneur, RFC should be operated as a public sector project. This was the earliest indication that APIDC had given that, if they did not find any suitable party to take over the project, RFC may have to be run as a public sector undertaking. Meanwhile, demurrage was mounting at the rate of Rs. 10,000 per day and on March, 2, 1966, APIDC decided to advance an amount of Rs. 16.5 lakhs to RFC, provided it fulfilled the conditions laid down by it.

On March 3, 1966, the Board of RFC coopted four nominees of APIDC on the Board of RFC. It also revoked all powers of MD, RFC (BHR) and entrusted them to VKR who was already serving on the Board of RFC as a representative of APIDC . Forfeiture notices were also issued to those in arrears to pay the amounts by March 20, 1966 and a further call of 25 per cent was made, to be paid on or before April 1, 1966. The State Government wrote to APIDC on March 4, 1966 that it should render immediate financial assistance to RFC without prejudice to the right of the Corporation not to restate its original guarantee and to limit such assistance to an extent of Rs. 10 lakhs by way of loan or investment in the company. It advised the Corporation to take charge of the machinery to avoid further accrual of demurrage. It also instructed that APIDC, while rendering assistance to the Corporation, should assume control of the affairs of the company and try to secure a suitable party for the promotion of the project.

Events moved fast from that day onwards. On March 7, 1966, MD of RFC conveyed the decision of his Board taken at the meeting on March 3, 1966 to APIDC and requested for a loan of Rs. 20 lakhs. On March 9, APIDC informed RFC of the sanction of Rs. 10 lakhs loan, including interest at the

rate of $8\frac{1}{2}$ per cent for the clearance of machinery for which the assets of the company were to be hypothecated. On the same day, MD, RFC wrote to APIDC, conveying acceptance of the terms and conditions. An order was also issued by the Secretary, RFC that no one was authorised to enter into financial commitments on behalf of the company. VKR became the Joint Managing Director in virtual control of the company, while BHR remained nominally as MD. APIDC took over charge of the company and its Accounts Officer was immediately deputed to Bombay to take necessary action for release of machinery and place them in a bonded warehouse. At a meeting held on March 12, 1966, the Board of APIDC ratified the action taken and nominated ANR, a senior official in the Directorate of Industries to act as Joint MD in place of VKR who became Chairman. Henceforth, APIDC became fully responsible for the further implementation of the project and proceeded to tackle such problems as the import of raw materials, progress of civil works, training of personnel, etc.

THE THIRD PHASE

On March 29, 1966, the Board of APIDC received a report from MD of the company in respect of the action taken by him for the clearance of the machinery. ANR was coopted on the Board of RFC on April 3, 1966 and took charge on April 4 as Joint MD. RFC also forfeited 15,000 equity shares held by DT of which an amount corresponding to 25 per cent had been paid for non-payment of call in spite of the notices issued on March 8, 1966. DT, meanwhile, had renounced Indian nationality and had taken the stand that as a non-Indian, the permission of RBI was necessary for investment and hence the call notice was not binding on him. DT had acquired shares on transfer from the shipping company and his view was that the transfer was not covered by specific permission of RBI.

Meanwhile, the Collector of Customs, Bombay wanted an undertaking for Rs. 15 lakhs to release the machinery and to keep it in a bonded warehouse, pending final assessment of the duty payable on it. A Commercial Bank was prepared to issue the guarantee, provided APIDC furnished a counterguarantee,

which it did on April 18, 1966. (Meantime GVR who had been MD, APIDC handed over charge to RKV who was well conversant with the case, since he had been handling it at the Secretariat and had discussed it often with GVR. There was, therefore, no change in the policy of APIDC, even though there was a change in the person of the Chief Executive). A further amount of Rs. 5 lakhs was released by APIDC to RFC on May 4, 1966, which was approved by the Government on May 13, 1966. Meanwhile, the Government of India informed the State Government on May 3, 1966 that the Ministry of Defence Production were not interested in taking over *all* the machinery but only a portion of it. On May 27, 1966, APIDC requested the State Bank of India for a clean cash credit accommodation of Rs. 50 lakhs. On May 19, 1966, the first instalment due to the French company was paid by RFC. (This payment was to become the subject of a controversy that has so far been unresolved. Briefly, RFC made the payment in rupees to the French National Bank at Bombay on the due date in return for which the latter returned a promissory note in token of having discharged the obligation. The Bank, however, took some time in remitting the money to France and, meanwhile, devaluation occurred on June 6, 1966. The French Bank paid off Renault, its customer at the devalued rate but demanded that RFC make good the extra amount consequent on devaluation. RFC contended that it had fully discharged its obligation by making the payment on May 19, 1966 and any delay in the Bank's remittance to France was no responsibility of theirs. In any case, since the promissory note had been returned by the Bank, there was no longer any legal obligation on the part of RFC and the question of making further payments did not therefore arise. It has been decided to resolve the matter through arbitration, as provided in the agreement between RFC and the French company.) Thus, slowly but steadily, the involvement of APIDC in the project became greater and greater and it became apparent that APIDC would have to provide much larger amounts to RFC, before any party could take over the project.

On July 4, 1966, the Board of APIDC ratified the action of MD, APIDC in extending assistance to RFC beyond Rs. 20 lakhs and authorised him to provide further assistance to the

project till it was taken over by a new promoter. It was reported to the Board that the machinery had been transferred to a bonded warehouse and efforts were being made to bring it to Hyderabad. A loan of Rs. 50 lakhs was also sanctioned by the State Bank of Hyderabad, out of which it was decided to pay the customs dues fully. Demurrage, however, was still to be computed but an 'on account' payment of Rs. 3.5 lakhs was made and a bond was provided by APIDC for further payment up to Rs. 12 lakhs, if necessary. All these matters were handled by APIDC which had thus taken over full responsibility of the project ; the requirements of RFC had to be met by quick and expeditious action on the part of MD, APIDC, who often had to take action in consultation with the Chairman, subject to ratification by the two boards (RFC and APIDC) subsequently. The fact that there was rapport between Chairman, RFC and MD, APIDC helped in pushing through many matters with speed and no difficulty was felt in arriving at decisions, as quickly as was required.

Meanwhile, negotiations with other parties in the private sector for taking over the project were initiated by APIDC simultaneously. A reference has been made earlier to the suggestion made by the Government of India that a public sector undertaking at Hyderabad should take over the project. But after some discussions, the Government of India informed APIDC in June, 1966 that the Ministry of Defence Production were not willing to take this step. In March 1966, a prominent industrial group (SJ) made a proposal to merge RFC with one of their concerns (JU) and some preliminary discussions took place in this regard. The Government of India, presumably having heard about these negotiations, wrote to the State Government on March 29, 1966 that in view of the past record of the group and the strictures passed on them in the Vivian Bose Report of 1959, the State Government would be well advised to take the concurrence of the Central Government before reaching any final decision on the proposal made by the group.

One of the private parties who showed an interest in the project was a company in which the State Government had nearly 50 per cent shares holding but had voluntarily limited their shareholding to below 50 per cent to enable the Birla

Group to manage it. The company operated a general purpose engineering workshop which was turning out mostly refrigerators, steel furniture, bus bodies, gas cylinders and some other machinery. Discussions were held with the President of the company (HAMW) on the basis of which, a letter was written by him on March 5, 1966 that the company was prepared to take over the project under the following conditions:

(*i*) They would invest immediately Rs. 2.5 lakhs in RFC.

(*ii*) They would provide an interim loan of Rs. 22.5 lakhs at 9 per cent interest per annum to be converted to equity after approval of the shareholders of the company and the Central Government was obtained.

(*iii*) The management of the company would be by a Committee consisting of five directors, of whom three would be from HAMW, 1 from APIDC and the 5th would be the existing Managing Director of the Company.

(*iv*) The General Manager of the plant should be a person recommended by HAMW.

(*v*) BHR would continue as MD subject to the approval of the Plant Management Committee.

(*vi*) The sole selling agency was to be given to a Birla Concern.

This offer was considered unsatisfactory, since basically the investment proposed to be made by the company in RFC was limited to Rs. 25 lakhs which was considered inadequate to implement the project. No mention was made by HAMW about the further resources to be raised for implementing the project but in informal discussions, they cast the obligation in this regard on the Government. The continuance of BHR, as MD was also not considered desirable in view of his past record with the project. The suggestion to award the sole-selling agency to a Birla concern was also not considered with favour since this would provide that group with considerable advantage without any corresponding stake in the company. Meanwhile, the devaluation of the Indian rupee occurred on June 6, 1966 and the proposal was dropped by both sides.

The next private sector party who evinced interest in the proposal to take over RFC was SRA, a prominent industrial group who operated a number of concerns in the North in such fields as Textiles, Chemicals, Fertilizers, etc. They had

two companies in Hyderabad also, one of which produced sewing machines, the other manufactured compressors for refrigerators. Early in May 1966, SRA indicated its interest in the project and deputed two of their senior executives to study it. After discussions, with the representatives of APIDC and the State Government, they formulated the following proposals.

Out of Rs. 150 lakhs share capital, they suggested that Rs. 90 lakhs should be in equity and Rs. 60 lakhs in preference. The commitment of APIDC for Rs. 20 lakhs underwriting was to be increased to Rs. 25 lakhs while SRA themselves would be investing Rs. 35 lakhs. Taking into account Rs. 25 lakhs from the existing promoters, the shortfall amounted to Rs. 65 lakhs in equity and Rs. 80 lakhs under loan. They wanted an assurance from the State Government and APIDC that this would be made up in case they were unable to raise it from the financial institutions. They also envisaged the management of the concern through a Board, consisting of three representatives of SRA, three from APIDC and three from outside. The Chairman of the Board would be the nominee of SRA, while the Managing Director would be appointed in consultation with APIDC. The entire project was to be operated as a joint venture between APIDC and SRA. They also stipulated that Rs. 25 lakhs already provided as a loan by APIDC should be retained to be repaid within three years after production had commenced. A Managing Committee would be constituted, consisting of one representative of SRA, one of APIDC and MD himself. The selling agency was to be given to SRA group at a commission of 5—7½ per cent. The deferred payment guarantee provided by APIDC was to continue. While these discussions were going on and it seemed as if a settlement would be arrived at with minor modifications, SRA suddenly dropped the idea on the ground that they had taken on other commitments such as a major fertilizer project. They, therefore, felt that their heavy commitments did not permit them to divert either men or money for this project, and they, therefore, voluntarily withdrew from the scheme.

Although a few others showed some interest in the project, the only party left in the field was the SJ Group who, as mentioned before, had earlier made a proposal in March, Their suggestion was to merge RFC with JU (a cement company

in Rajasthan) which had resources exceeding Rs. 1.5 crores and was making a profit of Rs. 1 crore per year. It was considered by them easier to persuade financial institutions to lend money to this company rather than to RFC directly. It was suggested that a loan of Rs. 1.5 crores be given to this amalgamated company by the IFC, IDBI, APIDC and SFC and JU themselves would invest Rs. 50 lakhs in the project. Along with the deferred payment advantage of Rs. 120 lakhs, this was considered sufficient to implement the project. It was also suggested that the amalgamation might take place through the purchase of shares of RFC from the existing shareholders at a negotiated price.

After SRA had opted out of the picture, negotiations were resumed in January with the SJ Group. Meanwhile, the devaluation of rupee had occurred in June, 1966 and the project cost was now estimated by them to be Rs. 497 lakhs, out of which rupee finances to an extent of Rs. 365 lakhs was to be made up as follows :

Present equity of RFC	25 lakhs	
Investment by JU	80 lakhs	Rs. 105 lakhs
Loan from IFC, etc.	200 lakhs	
Loan from APIDC/SFC	60 lakhs	Rs. 260 lakhs
Total		Rs. 365 lakhs

It was also stipulated that, should there be any delay in the sanction of the loan by IFC and associated institutions, APIDC and JU should make available the required finances on a parity basis. After the loan was sanctioned by the financing institutions, JU would take over full responsibility for the project. If, however, the loan was not sanctioned, the advance made by JU would have to be refunded by APIDC with interest.

In reply, APIDC suggested that the interim financial requirement for the project (for the next 4 months) would be Rs. 135 lakhs which could be met as follows :

Loan from APIDC (beyond 22 lakhs already provided)	Rs. 8 lakhs
Loan from SFC	Rs. 20 lakhs
Loan from SBI	Rs. 50 lakhs

Loan from JU (Equity)		Rs. 57 lakhs	
Total		Rs. 135 lakhs	

APIDC was prepared to further advance a small sum of Rs. 10 lakhs, provided JU also did so, in case it was considered necessary. Pending the merger, RFC was to be managed by a Board, consisting of three representatives of APIDC and three from the SJ Group. It was considered that with a loan of Rs. 200 lakhs from the financing institutions and further investment by JU, it should be possible to implement the project, without any additional resources being made available by APIDC.

Early in August (4th) 1966, further discussions were held between APIDC and the representative of SJ group (AKJ) who was himself the Managing Director of the Group. On the basis of these discussions, it was proposed by APIDC that the project could be financed as follows :

Investment by the original promoters	Rs. 25 lakhs	
Investment by JU	Rs. 90 lakhs	115 lakhs
Loan from APIDC and SFC	Rs. 50 lakhs	
Loan from the financing institutions	Rs. 200 lakhs	250 lakhs
Total		Rs. 365 lakhs

It was also stipulated that interest on the loan from APIDC and the duration of repayment of this loan should be the same as those laid down by the financial institutions. It was also provided that APIDC/SFC should have at least one nominee on the combined Board of JU&RFC, provided the strength of the Board was not more than 7. As regards the interim financial requirement of Rs. 180 lakhs, they were to be made as follows :

Original Promoters	Rs. 20 lakhs
Loan from APIDC/SFC	Rs. 50 lakhs
Loan from the SBH	Rs. 50 lakhs
Advance from JU	Rs. 60 lakhs
Total	Rs 180 lakhs

The applications for the merger between JU and RFC was to be made immediately and till the merger was completed, a Board of six representatives, consisting of three from APIDC and three from JU were to manage the project. Applications

to the financial institutions and SFC were also to be made immediately and a promotional agreement on the above basis should be entered into between APIDC and the SJ group.

The SJ group in reply, while generally accepting the terms and conditions proposed by APIDC raised the following points :

(1) In case of a shortfall in the Share Capital contribution of the original promoters below Rs. 25 lakhs envisaged above, APIDC should make good the amount.

(2) APIDC will have only one nominee on the combined Board of JU and RFC till the strength of the Board was 10.

(3) The advance of Rs. 60 lakhs from JU will be either from JU itself or arranged through JU. In case of the latter, APIDC should guarantee that, if the merger did not take place before February 28, 1967, the entire amount should be refunded by them with interest. The dead line was proposed, with a view to obtaining tax benefits accruing to JU, consequent on the merger.

(4) JU would counter-guarantee APIDC's guarantee of deferred payment to RFC which was to continue even after the merger.

In their reply of August 19, 1966, APIDC did not accept any of the conditions stipulated except the last one . The time limit mentioned by JU was considered to be too early for all merger formalities to be completed. The State Government were also addressed to accord their approval to these conditions since APIDC was in charge of RFC purely on behalf of the State Government and had otherwise no inherent right to manage the company. While the SJ Group accepted the clarifications, they pressed on October 4, 1966 for a quick decision to be taken on the agreement since the monthly expenditure incurred by the company was amounting to Rs. 2.4 lakhs. The State Government, meanwhile, had written letters to IFC, IDBI, ICICI and LIC, intimating the merger proposals of RFC with JU and recommending their application for financial assistance to the project.

On November 9, 1966, a draft agreement to be entered into between APIDC and the SJ Group was sent by the latter, setting forth the terms on which the project would be taken over by JU.

One of the terms included a written confirmation by the State Government of the obligations undertaken by APIDC, before any accommodation could be arranged from a commercial bank for Rs. 60 lakhs. APIDC pointed out that it was never the intention to obtain a counter-guarantee from the State Government and that, therefore, this should not be insisted upon. The SJ Group accepted this position tentatively and arranged credit for Rs. 60 lakhs from PNB[7] which was to be refunded, if the merger did not take place before February 28, 1967.

The amalgamation scheme contained a reference to the manner in which the existing shareholders of RFC were to be paid by JU. After protracted discussions between the share-holders of RFC and the representatives of SJ in which APIDC took a leading part, it was agreed that the latter would provide, for the fully paid-up shares, 65 per cent of the amount paid by RFC's share-holders in terms of JU shares, and for the partially paid-up shares, 60 per cent would be paid on the same basis. The merger applications were filed in the High Court in A.P and Rajasthan (where JU was located)—early in December, 1966.

On receipt of the letter from APIDC, the State Government had approached the Central Government for concurrence of the merger proposal in view of the specific directives, given by the Central Government in April, 1966 not to take a final decision without their approval. The matter was discussed at a meeting of the Cabinet sub-committee who felt that the full Cabinet was not likely to approve the proposal, unless it were absolutely certain that there was no other party willing to take up the project. In December, 1966, the Secretary to the Government of India, in the Ministry of Industry, informed the State Government that another Group (M) which had extensive interests in UP were interested in the project and suggested that APIDC and the State Government might discuss the matter with them. Since APIDC had already signed an agreement with the SJ Group regarding the merger, it was intimated to the Government of India that it would be now awkward for them to enter into a fresh negotiation with a new party. The Government of India, however, made it clear

[7]Punjab National Bank.

that unless negotiations were conducted by APIDC with any other party considered suitable by the Government of India, there was little or no chance of the merger with the SJ group, being approved by the Cabinet.

Early in 1967, KNM, one of the Chief Executives of the M Group, came to Hyderabad and discussed details of the project. In his letter, dated January 16, 1967, he suggested that the total cost of the project (which was brought down to Rs. 440 lakhs by deletion of certain items, not considered immediately necessary) could be financed through an equity investment of Rs. 85 lakhs and a loan of Rs. 220 lakhs besides the deferred payment advantage of Rs. 135 lakhs.

Further discussions took place at the end of January, 1967, on the basis of which a draft memorandum of understanding was prepared. This was substantially similar to the agreement already arrived at between the SJ group and APIDC. On February 28, 1967, the Government of India wrote to the State Government that the application for merger filed by RFC with JU might be withdrawn.

Since nothing was heard from the M Group for sometime, APIDC sent a telegram to them on March 21, 1967 for a confirmation of their continued interest in the project before taking specific action for withdrawing the merger application. On the same date, KNM sent a reply that since a delay of three months had occurred since the original proposal was made, they were not interested in the project any more. This was not correct, since the matter was actually pending with them for a final clarification. The impression left with APIDC was that the M Group were never really serious about RFC and that they merely went through the formalities of negotiations with APIDC to obtain a favourable clearance from the Government of India for a fertilizer project they were negotiating simultaneously.

After the M Group had backed out, discussions were resumed with the SJ Group who had meanwhile agreed to extend the time limit beyond February 28, 1967. Efforts were also made to release the machinery from the Customs from the Bonded Warehouse, Bombay which involved a constant shuttling between Bombay and Delhi. The Central Board of Revenue, Delhi advised the Collector of Customs, Bombay to release the

machinery on a guarantee to be given by APIDC. The Collector of Customs was, however, unwilling to do so unless a specific bond was provided for a very large amount. After considerable discussions, it was agreed that a bond for Rs. 15 lakhs should be given by APIDC towards payment of additional Customs Duty for the machinery to be released after payment was made for the normal custom dues, which were valued at that time to amount to Rs. 40 lakhs. Around this time, some allegations were made in Parliament that the machinery of RFC was overvalued through collusion of DT with RFC, violating foreign exchange regulations and that, therefore, it was liable to heavy penalty or even confiscation. It was pointed out to the Customs Authorities that APIDC, which was a State organisation had nothing to do with this situation, even if this were true. In February, 1967, the Enforcement Directorate of the Ministry of Finance sent some officers to check up the documents and files of RFC whether this could be substantiated and APIDC provided them full facilities for the investigation.

On April 7, 1967, the SJ Group wrote a letter to APIDC, suggesting immediately the following steps to be taken in implementing the project :

(1) to proceed with the amalgamation scheme;
(2) to proceed with the loan applications with the financial institutions;
(3) to coopt representatives of the SJ group in the Board of RFC;
(4) to provide adequate credit facilities from APIDC till the merger;
(5) to permit recruitment of senior personnel for the project by JU.
(*vi*) to arrange to send technical personnel abroad.

APIDC made it clear, in reply, that they could not make any further advance beyond the Rs. 50 lakhs promised earlier and that any additional amount required by the project immediately would have to be provided by the group themselves. It was also suggested that the Rs. 60 lakhs credit made available by PNB (which was refunded early in March 1967) should now be made available again to meet immediate commitments. It was also made clear that the charge on the existing assets held by APIDC should not be diluted, even if a *pari passu*

charge were given to the other financial institutions and suitable additional security should be provided by the JU Group to satisfy APIDC.

At this stage the Government of India took a final decision in July, 1967 not to allow the merger of RFC with JU and, as an alternative, offered a loan of Rs. 2.5 crores to the State Government to be made available to RFC through APIDC. The reasons for this decision are not known but it would seem that in the general atmosphere prevailing in the country against monopolistic big business, consequent on the publication of the Hazari Report, it was considered undesirable to allow a group who had already earned strictures earlier, to take over an important project of this type. The Government of India felt that with the loan of Rs. 2.5 crores made available by them, it would be possible for the State Government to implement the project in the public sector itself. Although the Government of India were requested to provide a portion of the amount as equity, they declined to do so and the entire amount was given as loan with 7 per cent interest to be repaid in 15 years with a moratorium of 2 years after the loan was sanctioned. In view of the categorical directive from the Government of India, further negotiations with the SJ group were dropped and the project was henceforth implemented as a Public Sector Project.

The decision of the Government of India was welcomed by the State Government, and APIDC which was finding it difficult to finance the project single-handed. It was also welcomed by the Legislature and the Press which had taken a keen interest in the project. The existing private sector shareholders were also happy about the decision since it meant that the project was finally being stabilised which meant that their investments in it would not be lost. However, they were not too happy that one of the conditions imposed by the Government of India in providing the loan was that the existing shareholders should retain their investments in it. Most of them were looking forward to receiving easily negotiable shares of JU as a result of their discussion with the SJ Group and the decision of the Government of India meant that their investment in RFC would be locked up for a considerable time. There was a suggestion that they might take recourse to legal action to

prevent the Government of India from taking over, which might have made it awkward for APIDC, who till that time were only a creditor but not a shareholder and hence their management of the project was based on the willingness of the shareholders to entrust them with that responsibility. When it appeared to MD, APIDC, that any legal action by the shareholders might create further complications in an already confused situation, he moved the State Government for release of Rs. 25 lakhs immediately for investment in RFC which enabled APIDC to secure a firm control over the company. The Project started production in March, 1968 and was formally inaugurated on November 1, 1968.

CONCLUSION

What does one make out of this long recital of events which covers a span of dozen years from 1956 when the licence was first issued till 1968 when the project was finally commissioned? Firstly, it highlights the long gestation periods that have become a common feature of most projects in India. Even if the present case is somewhat unusual, a period of five years is normally the common time lag between licensing and going into production. Such delays produce in their wake additional problems: escalation of costs, changing Government regulations, mounting pre-operational expenses and, at times, changed market conditions. Often, the inability of Government officers to reach a decision is to be blamed. Although machinery for the project had arrived at Bombay by the middle of 1965, it was not till 1967 that it was removed to Hyderabad and for six months the delay was merely due to the fact that the Collector of Customs, Bombay could not make up his mind on what basis to release the machinery. A second impression gathered from a reading of this case study is the impact of personalities and personal factors in public decision. The refusal of the State Government to permit APIDC to provide a guarantee was due largely to the objections against the chief promoters and to a lesser degree against the Chairman. Barely four months later, when DT became the Chairman, the approval of the State Government to APIDC was immediately given, but it was the association of DT with the project that raised much suspicion in the Customs. Again, the Government of India

were unwilling to approve the merger proposal of RFC with JU because of the association of the SJ group with JU. Thirdly, what surprises one is the suddenness with which decisions are reversed. The State Government's approval of a proposal it had rejected four months back and the Government of India's decision to provide a loan of Rs. 2.5 crores to the project are instances. In fact, the Government of India were approached as early as March, 1966 whether they would be interested to take over the project; they were unwilling to do so at that time, but 15 months later, they were willing to provide a massive loan to implement the project.

Another important point, the case study brings out, is the role played by APIDC and its key personnel. It was its persistence in supporting the project in the first instance and later in undertaking the obligations which devolved on it, which were responsible for bringing the project to fruition. Very often decisions had to be taken in a matter of hours and APIDC would do so because of the flexibility of its working. Here is a good instance of the utility of an organisation, supported by Government but not quite a part of it. It must be confessed that, although one speaks of APIDC as an impersonal institution, it is the men running it, who matter. But for the single-minded devotion of a few key personnel in the organisation (such as the Deputy Chairman and the successive MD's) it would have been impossible for that institution to take over the responsibility, particularly amidst the criticism that was heard in the press and Legislature. It is true that they could do so because the highest political executive—the Chief Minister—backed them but he did so because of the confidence displayed by APIDC in the matter. Ultimately, it is perhaps this that is crucial—the devotion, the sense of involvement and single-minded pursuit of an objective by one or two people. It is this factor that often distinguishes the private sector from the public sector; but one must concede that it is more difficult in the latter, since the pressures are greater and the rewards (except satisfying one's own conscience) are nil. But where such factors are present, there is no reason why a public sector project should not attain the same degree of success as one in the private sector, for sectoral differences mean little and it is the human element that ultimately counts.

THE CREATION AND ABOLITION OF THE POST OF DIRECTOR OF SOCIAL WELFARE

HARSHAD TRIVEDI

This case study relates to the creation of the post of a full-time Director of Social Welfare in one of the Union Territories; the appointment of a professional specialist in the field of social welfare to this post, his personal involvement in the programme, his methods of operation and finally, the abolition of the full-time post, on conclusion of his normal tenure, and its merger with the post of the Development Commissioner.

The history of Social Welfare in the Union Territory can be traced to the year 1945, when professional social workers had begun to toy with the idea of establishing welfare programmes on an organised basis. Before this, the Union Territory (UT) Administration had created a Social Education Branch in the Directorate of Education. The Social Education Branch had a skeleton staff headed by an Assistant Director of Social Education, one from the administrative services, assisted by a trained Social Worker. This unit was responsible for initiating after-care schemes and assisting in the development of voluntary organisations doing rescue and rehabilitation work for women and children.

The idea of establishing social welfare activities on an organised footing was given impetus in 1957, by the Union Ministry of Home Affairs. The then Home Minister and Deputy Minister took considerable interest in giving a concrete shape to this idea.

On July 4, 1958, the Home Ministry had convened a meeting to consider a Child Welfare Programme in the Union Territory proposed by the Indian Council of Child Welfare . The Deputy Home Minister was in the Chair. At this meeting, a suggestion was put forward that there should be a Director of Social Welfare, responsible not only for Children's care and After-care Programmes, but also for other social welfare problems, women's problems, etc. This proposal was supported by many of the

members. The Senior Research Officer of the Planning Commission who was present at this meeting indicated that there was a provision of Rs. 8.67 lakhs for the Care Programme of the Union Territory which involved the setting up of a Remand Home, two Certified Schools, a Probation Hostel, the Probation Service, a Beggars' Home, and the appointment of one Welfare Officer during the period of the then current Second Five Year Plan. The approval of the proposal made by the Committee was communicated to the Chairman of the Indian Council of Child Welfare on July 30, 1958, by the Chief Commissioner.

Following this, the Home Ministry requested the Chairman of the Indian Council of Child Welfare to suggest a suitable person for the post, because it was thought that it would be difficult to get a suitable candidate by the usual process of advertisement for the vacancy. It was felt that the best way was to appoint an experienced person with necessary professional qualifications, such as a post-graduate degree in Social Work, and with whose work the Chairman was familiar. On August 18, 1958, the Chairman gave the names of two persons to the Chief Commissioner; these were passed on by the Chief Commissioner to the Joint Secretary in the Ministry of Home Affairs, with the remarks that one of them was over 50 and would not be suitable for a long term appointment. The Chief Commissioner also suggested that "the Ministry of Home Affairs might make the appointment under their own powers and also secure the approval of UPSC". The Joint Secretary in his reply of August 27, 1958 said that "in view of the urgency of the matter, however, you may fill up the post under your own powers for a period of six months or till a selection is made by UPSC, whichever is earlier."

The Chief Secretary, UT Administration, thereupon wrote a letter to the younger of the two persons on September 1, 1958, giving the requisite details of the assignment and enquiring whether he would be willing to accept the appointment, if an offer was made to him formally. The person concerned agreed to accept the offer. The Chief Commissioner had occasion to meet him and wrote to the Ministry of Home Affairs on September 13, 1958 that the person had no experience of actual institutional work and was too young to hold the post of Director, Social Welfare. Besides, the Chief Commissioner

made reference to a third person whose name had been suggested by the Deputy Secretary, Home, a few days earlier. This was one of those names sent to him by the Deputy Home Minister, on September 10, 1958.

This person was finally appointed as the Director of Social Welfare and we shall call him Mohanlal. He was in his late forties and had 10 years' experience of administrative work in the field of Social Welfare. He was holding the post of Deputy Director, Social Welfare in his home State ; he was concurrently the Chief Inspector of Certified Schools and Institutions and Reclamation Officer in the State.

Mohanlal had a background of social welfare work. He was a professionally trained social worker. He was reported to have taken up this profession under the influence of the dedicated social workers of the time. He wore khadi and had the personal bearing of the Gandhian political workers and Congress leaders of those times. According to his friends, he was not an active political worker; though in his youth, he was said to have been a follower of the reformist Hindu sect, the Ramakrishna Mission, and was reported to be a staunch Brahmin. It was reported that during his earlier assignment, Mohanlal had encountered difficulties with administrators because of his enthusiastic pursuit of proposals which had often impelled him to by-pass normal administrative channels. This had led to strained relations with his superiors in his previous assignment. It was said that at times he went above his immediate administrative superiors to have appointments of staff and expenditure on various items regularised. It was further reported that under pressing circumstances, he did not mind taking his problems to the political bosses over the heads of his superiors for getting things done and regularising his actions.

Mohanlal had participated in quite a few professional conferences abroad. In one such conference, the Deputy Home Minister, Mohanlal and his friend, Sunderlal had represented India. Besides, the Deputy Home Minister was acquainted with Mohanlal's work in his home State as the Deputy Home Minister had been then an Honorary Magistrate of Juvenile Courts. Sunderlal was also a trained social worker employed at that time in the Social Education division of the UT Administration. He was said to have helped Mohanlal establish contacts, when

the Home Ministry was looking for a suitable person to hold the post of the Director of Social Welfare.

Having selected the person, the Recruitment and Service Division of the UT Administration put up a note to their Finance Department requesting them to clarify whether it was within the competence of the Chief Commissioner to create a Class I post of this kind for a period of 6 months. The Under Secretary, Finance Deptt. stated : "I think the position does not appear to be free from doubt, and it would be better to get it clarified from the Ministry of Home Affairs and the Ministry of Finance." He added, "It was doubtful whether the volume or the nature of work justified the creation of a post which corresponds to the scale of pay of the Director of Education, *viz.*, Rs. 1000-50-1400, who had multifarious duties to perform." He favoured a scale of Rs. 600-1150.

The Chief Commissioner stated that Mohanlal was already in the scale of Rs. 650-1100 and was drawing a salary of about Rs. 1000 in that scale and that his name had been suggested by the Deputy Minister of Home Affairs. If it was decided to appoint Mohanlal, he would have to be given the scale of Rs. 1000-1400.

The Home Ministry wrote to the Chief Commissioner on October 11, 1958 saying that he might write to Mohanlal enquiring whether he could come personally to discuss the matter. Mohanlal agreed to consider the offer communicated to him on October 16, 1958, gave his written consent on October 29, and expressed his willingness to come for a discussion at his own expense. He did so, informally, and met the Deputy Home Minister, amongst others.

On November 4, 1958, the Chief Commissioner sent a note to the Chief Secretary saying that the Deputy Minister had met Mohanlal and found that he was prepared to come. The Chief Commissioner then asked the Chief Secretary to put up a draft letter for the State Government, requesting them to relieve Mohanlal and allow him to come on deputation. The UT Chief Secretary communicated the selection of Mohanlal to the Chief Secretary of the State on November 14, 1958, and indicated that the appointment would be on deputation for a period of six months. He simultaneously made a formal request to the Ministry of Home Affairs on November 17, 1958 for sanction

of the Govt. of India for the creation of the post of Director of Social Welfare. And, Mohanlal wrote to his State Government on November 21, 1958, requesting his release to take up the job.

The State Government perhaps was not unhappy about the possibility of Mohanlal's departure. But the concerned Deputy Secretary in the State Government wrote, on November 25,1958 enquiring : "Before taking further action in the matter, it has to be ascertained whether Mohanlal had applied to the UT Administration for the post or whether this appointment is being made without such application having been made by him." The Chief Secretary clarified that Mohanlal's name was suggested to them by the Home Ministry, and that he had not applied direct to the UT Administration.

In January 1959, the Home Ministry sanctioned the creation of a temporary post of Director of Social Welfare up to February 28, 1959, in the first instance. An express telegram from the UT Administration to the State Government followed, enquiring about the probable date of Mohanlal's reporting for duty in the UT Administration.

The deputation of Mohanlal was agreed to in principle by the State Government on January 21, 1959 but all the terms and conditions proposed by them had to be formally accepted by the UT Administration. The latter telegraphically replied on February 2, 1959 saying, "Terms acceptable to UT Administration. But the travelling allowance will be paid by the UT Administration both ways in accordance with Central Government T. A. rules. Shri Mohanlal may kindly be relieved immediately."

In the meanwhile, the Joint Secretary concerned with the Union Territories, Ministry of Home Affairs issued a circular letter on February 9, 1959 assigning additional duties to Mohanlal, and informing all concerned organisations.

> "It has been decided that, while concentrating principally on schemes of social welfare relating to this particular UT, he should also advise us regarding the working of similar activities in other Union Territories. He will for this purpose, act as a Special Officer in relation to all Union Territories."

A copy of this circular was sent to the Chief Commissioner on February 11, 1958 by the Deputy Secretary, Ministry of Home,

saying that no formal appointment for the purpose was proposed to be made and the duties in respect of the other Union Territories will be performed in addition to his duties.

While final arrangements were thus being made to make full use of the services of Mohanlal on his joining, the Deputy Secretary of the State Government desired that the terms and conditions of deputation laid down by them should be adhered to strictly. One of the terms was that Mohanlal would draw T.A. on transfer at the rates applicable to the State Government officers and not, as proposed by the UT Administration at the rates applicable to Central Government Officers. This was agreed to by the UT Administration by an express telegraphic reply on February 25, 1959.

> "Reference your letter February twelfth. Terms acceptable. Kindly relieve Shri Mohanlal immediately".

The State Government responded promptly and their Deputy Secretary forwarded a copy of the Resolution of Labour and Social Welfare Department, dated March 6, 1959, sanctioning the deputation of Mohanlal.

On March 10, 1959 the UT Administration wrote to the Ministry of Home, requesting the approval of the Government of India for the appointment of Mohanlal. The Section Officer concerned in the UT Administration put up a note on March 12, in which he said, "The Chief Commissioner has the powers to create Class I post for a period of 6 months with powers to extend the post by not more than a further period of 6 months". The Deputy Secretary, Home also wrote on March 18 to the Chief Secretary of the Administration that the Chief Commissioner was empowered to create posts in Class I service initially for a period of 6 months.

So the post was created by the Chief Commissioner. Mohanlal took over as Director of Social Welfare in the UT Administration on March 28, 1959. The Administration informed UPSC on April 8, 1959 of their action and said, that in view of the urgency of the matter, they had appointed Mohanlal as Director of Social Welfare (DSW), on deputation from a State Government with effect from the afternoon of March 28, 1959.

In the UT, efforts at organising social welfare activities were under way. Various schemes had to be framed and staff appointed. The Administration considered it essential to continue the post

of DSW for the remaining period of the financial year in the first instance. They requested for further sanction of the post until February 29, 1960, which was given by the Home Ministry. In the meanwhile, the Chief Secretary asked Mohanlal on October 5, 1959 to function as the Secretary of the Social Welfare Department of the Administration. He was asked to prepare rules for the recruitment to the post of DSW. Mohanlal prepared a draft and sent it to the Chief Secretary the same day. The Under Secretary (Appointment) put up a note on October 10, 1959 saying that as the post was likely to continue even after February 29, 1960, it would be necessary to finalise the recruitment rules in consultation with the Ministry of Home Affairs and UPSC. He said that the mode of recruitment by transfer was most suitable in this case. Commenting on this, the Chief Secretary wrote, "We should say only that the post shall be filled by transfer, from a State Service, of an officer who has experience of Social Welfare work. The post will be a tenure post for 4 years".

Meanwhile, Mohanlal set himself to the task of organising the work of the Social Welfare Directorate. On July 11, 1959, the Deputy Secretary, Home put up a note to the Joint Secretary reminding him that the Home Minister had desired to know what progress had been made by Mohanlal after he had settled down in his job. He further mentioned that Mohanlal had sent some notes on July 2, 1959 which gave an idea of the work initiated by him :

(1) Inspection of Poor House and sending budget estimates for the next year to the Finance Ministry.
(2) Proposals submitted to make the Bombay Beggars' Act operative in the UT. Besides, contacts were established with the persons working in the field of begging, and proposals evolved for prevention of crime, etc.
(3) A number of institutions for children were visited and inspection notes recorded for future use. A regular inspection service was evolved.
(4) A scheme was prepared to apply Bombay Childrens' Act, to Children's Home in the UT; the Home had been given grants-in-aid by the government.
(5) Arrangements to shift the Remand Home to the newly

allotted premises had been completed. A scheme for classifying the children and giving them suitable treatment was being made.

(6) The UT Children Bill had been thoroughly examined and the draft embodying necessary changes was sent to the Ministry of Law, and the Bill was ready to be introduced in Parliament.

(7) After-care organisations had been inspected and necessary help and guidance given. A detailed note was presented to Government on Moral and Social Hygiene and After-care programme.

(8) The *Mahila Sadan* was twice visited and suggestions for improvements discussed with its Chairman.

(9) A meeting of all the Magistrates in the UT was held to explain Probation Legislation.

(10) A suggestion was made to have a Home organised for unmarried mothers.

(11) Lastly, the need for quickly building up the Directorate by getting the necessary posts sanctioned was impressed on the authorities.

On September 12, 1959, the Deputy Secretary, Home wrote to Mohanlal requesting him to send them a note on implementation of the proposals made by him and also a note on future activities.

Mohanlal got in touch with the Private Secretary to the Home Minister and obtained an appointment to see the latter on September 17, 1959. In his reply to the Deputy Secretary, Home on September 15, 1959, he did not mention this appointment, but he stated that he would send the notes in a week's time and see the Deputy Secretary on September 19, 1959.

Mohanlal called on the Home Minister on September 17, 1959. About this meeting, Mohanlal recorded amongst other things that the Minister had expressed the wish that DSW might approach him when necessary so that difficult procedural matters might be settled quickly. He sent a copy of his record of the meeting to the Ministry of Home Affairs and added that the Home Minister was specially interested in the following :

"1. Regarding children's work, the Home Minister had said that meticulous care should be taken to see that the children were not huddled together without any proper

individual programme for each child.

2. The Home Minister was "very anxious" to see that the *Mahila Sadan* was put on proper basis and that as all the grants were coming from the Administration, it should have its own say for bringing about reforms. The Home Minister was aware that there was a jumble of all types of girls and women in the *Mahila Sadan* and wished that proper classification was introduced.
3. The Home Minister was aware of the conditions of the Poor Home and was keen that things should be re-organized properly and immediately.
4. The Home Minister was in the know of the stage of development of work and wanted it to gradually improve."

Mohanlal met the Deputy Secretary, Home, on September 22, 1959. In a note submitted to the Joint Secretary, the Deputy Secretary wrote, "Shri Mohanlal, DSW was here today. I discussed the progress of schemes with him. It appears he had an interview with Home Minister recently and had explained to him the present position of the various schemes". The Deputy Secretary had further observed that : "Mohanlal expects to finalize schemes for 1959-60 in about two weeks when he will come up for sanction. I have advised him to bring up the schemes in instalments so that approval may be communicated as soon as a scheme is ready. We will send a note for Home Minister's information in about two to three weeks from now".

In his letter of October 17, 1959, as scheduled, DSW sent details of the following schemes relating to "care" programmes.

(*i*) One Home for the non-affected children of leprosy patients ;
(*ii*) Reorganization of the Poor House;
(*iii*) One Remand Home for girls;
(*iv*) One Certified School for girls;
(*v*) Welfare Services in prison;
(*vi*) Counselling and Guidance Bureau; and
(*vii*) Expansion of Probation Service, including one Probation Hostel.

The note emphasised that out of the seven schemes, three, *i.e.*, (*i*), (*ii*) and (*vii*), had been agreed to in principle by the Finance Department of UT and an initial start had been made in respect of them. Pending detailed scrutiny by Finance, DSW

requested the Ministry of Home Affairs to convey administrative approval after obtaining the necessary concurrence from the Planning Commission.

This was examined in the Home Ministry. The concerned Section Officer observed that the estimates of expenditure as suggested by the UT Administration for these schemes "appear to be on the high side"; he mentioned that the Planning Commission had expressed doubts in regard to the scheme for a Home for children of leprosy patients; strictly speaking, this was not relatable to the care programme; but the Planning Commission had already agreed to make a slight deviation because welfare services in the Union Territories had to be stepped up. Similar Homes in two other Union Territories had been sanctioned previously.

Besides, the Planning Commission had agreed to setting up of a Certified School and Remand Home for Girls. They had further recommended that the scheme for setting up of welfare service in prison may be approved, and that the probation service and Probation Home were within the scope of approval.

About the setting up of a Counselling and Guidance Bureau, the Section Officer stated that it was doubtful whether the scheme could be related to the care programme, but it seemed to have the support of the Planning Commission. Moreover, the Ministry of Home Affairs had already approved Juvenile Guidance Bureau under the care programme. The Working Group on Social Defence for the Third Plan had viewed that institutionalization might be avoided as far as possible. The scheme had to be approved if the Planning Commission had no objection.

Lastly, the Section Officer indicated that the Home Ministry had to give only administrative approval so that DSW may complete preliminaries to the actual starting of the services. A total provision of Rs. 2.94 lakhs for care and after-care programme existed for the year 1959-60, and the Administration had to spend within this limit. For the Second Five Year Plan as a whole, a provision of Rs. 8.67 lakhs was available.

The Deputy Secretary agreed that the estimates of DSW were high, though he observed that conditions in the UT required slightly higher scales. He further noted : "I am not at all sure that we should agree to the Home for non-affected children of lepers, which is quite unconnected with the care and after-care

programme". He felt that the scheme required more detailed examination and until that was done, it was to be excluded from administrative approval.

About the Counselling and Guidance Bureau, the Deputy Secretary proposed to restrict "sanction to Juvenile Counselling and Guidance for delinquents or for high delinquency areas". This, he said was the farthest they could go for the care programme. He added : "The Director, Social Welfare will be advised to reduce the scope of the scheme accordingly".

The file then went to the Planning Commission for comments. The concerned Director in the Planning Commission noted on October 30, 1959, supporting the scheme as follows : "With regard to the scheme for a Home for the non-affected children of the leprosy patients, it is felt that though the scheme does not strictly fall under social defence programmes, it may be treated as relatable to care programmes.

On this, the Deputy Secretary, Home, put up a note to the Deputy Financial Adviser on November 3, 1959 asking for Finance's concurrence to the rest of the proposals and desired that the matter of Home for lepers' children be taken up for further discussions with the Planning Commission. The Deputy Finance Adviser endorsed the views of the Deputy Secretary, Home but added, "The schemes mentioned in the proposed draft have already been approved by the Planning Commission". He added that the expenditure sanction would be issued on receipt of the estimates of expenditure relating to the proposed schemes approved by the Finance Department of the Administration.

In his letter of November 6, 1959, to DSW on the proposed schemes, the Deputy Secretary, Home advised him that the "Scheme of Counselling and Guidance Bureau be modified so as to restrict it in scope to cover delinquent children and children of high delinquency areas only". He further stated that if the services had to be extended to others, the provision would have to come from outside the care programmes. Finally, he approved six out of seven schemes, leaving aside the scheme of a Home for the children of leprosy patients.

Thereafter, a meeting was convened in the Home Ministry for the detailed discussions on each scheme. The meeting was attended by the Deputy Secretary, Home, DSW and their two

respective Finance advisers. DSW expressed surprise at the elimination of the scheme for lepers' children from the approval of Government, and felt that it was being excluded probably because it was looked upon as purely a health scheme. He followed up the discussions by a letter on December 5, 1959 in which, in addition to arguments in support of his proposal, he clarified : "In the first instance, the children are to be segregated not merely on health ground but under Section 7 of Bombay Children's Act which is operative in the U.T."

Pressing his point of view further, DSW mentioned : "The children who are to be covered under this scheme are living in highly objectionable social surroundings and there is an immediate need to segregate them, as early as possible, so that they do not take to delinquent behaviour as they grow older." According to him, the problem had acquired added importance as it had already been discussed in Parliament.

The Deputy Secretary, Home put up a brief note on December 8, 1959 thus, "We may agree with this clarification. The scheme will have to be shown again to Deputy Finance Adviser but not to the Planning Commission who have already supported it". In the meanwhile, DSW sent a reminder on January 7, 1960 to the Deputy Secretary, Home to expedite the approval. This was put up to the Deputy Finance Adviser who in his note of January 11, 1961, said that the proposal was to accord administrative approval to the starting of the Home for the children of leprosy patients in the UT under the care programme during the current financial year. As the Planning Commission had already agreed, the proposal might be approved. The Deputy Secretary, Home sent the approval to DSW the next day.

The general approval of the schemes by the Home Ministry had prepared the ground for implementing the schemes after working out the details. The services of Mohanlal were still needed. The Deputy Secretary, Home had conveyed the Government's approval for further extension of the post on September 22, 1959. On November 2, 1959, he requested the State Government to agree to the continued deputation of Mohanlal. At the same time he asked them to send the confidential character role of DSW. The State Government sanctioned the extension of the period of deputation of Mohanlal until February 29, 1960.

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On November 7, 1959, the UT Administration wrote to UPSC, saying that draft recruitment rules providing for transfer as the only mode of recruitment to the post of DSW had been forwarded to the Ministry of Home for obtaining the approval of the Commission. The Deputy Secretary, Home, while communicating these to UPSC indicated that the post was sanctioned up to February 29, 1960, but was "likely to continue indefinitely". The Home Ministry sanctioned the continuance of the post on February 25, 1960. The Secretary, UPSC felt unhappy about the unilateral decisions taken in this regard and said that they had concurred in the *ad hoc* appointment of Mohanlal as a purely temporary measure. However, they conceded that there was no difficulty in continuing Mohanlal on the post which was agreed to in principle to be a tenure post for 4 years.

On January 31, 1961, Mohanlal wrote to the Under Secretary (Appointments), UT Administration, requesting that necessary advance measures be taken to complete formalities for further continuance of the post of DSW. The Under Secretary wrote to the Secretary, Ministry of Home on February 16, 1961, for sanction of the post until March 1962. Again, on February 25, 1961, the Under Secretary wrote to the Ministry of Home, explaining the case and adding that the services of Mohanlal were still required by them for a further period of 2 years, so that the schemes already initiated, and others which were being initiated by him may take definite shape under his guidance. The Home Ministry requested the State Government on March 9, 1961, for further deputation of Mohanlal up to February 28, 1963, and two weeks later sanctioned the continuance of the post for one more year, *i.e.*, up to March, 1962.

Early in 1959, the Home Ministry had approved the scheme for a Remand Home and for a Certified School of Girls. Mohanlal was anxious to start this work quickly. While inspecting a building proposed to be hired for the Certified School for Girls, he took with him his colleague, Sunderlal, who was then working as the Chief Probation Officer in his department. The rent agreed to be paid for the building was reported to be on the high side; Mohanlal did not bother about the necessary administrative processes, involved in securing formal clearance to the hiring of this building. He hired it. He was impatient to commence the work; and he did not allow normal

administrative processes to hinder speedy implementation of the scheme. When the Certified School for Girls and the Remand Home came into being, it was possible to reduce the crowd at the *Mahila Sadan*. All the girls below 18 years of age who had been housed in the *Mahila Sadan* were shifted to these new institutions. The premises of *Mahila Sadan* were thus available to accommodate if required, in one of its blocks the women brought under the Suppression of Immoral Traffic Act.

Early in 1960, the UT Administration had put up a proposal for starting a Protecting Home for Women and Girls under the Suppression of Immoral Traffic Act. In framing this proposal, Mohanlal had indicated two alternatives for its administration. One was that it might merge with the *Mahila Sadan*; the other was to run it as a separate institute under the auspices of the Association of Moral and Social Hygiene in India which was running the *Mahila Sadan*. On this question, the Government remitted the matter to the UT administration to examine the question of adequate watch and ward arrangements for the inmates of this home, if it were to be organized as a separate entity.

In the work of the organisation of the Directorate, Mohanlal was reported as having adopted procedures and attitudes similar to those which he was stated to have employed in his home State. He was said to be impatient of delays and went ahead, often in disregard of routine administrative proprieties. The Under Secretary connected with the Directorate's work felt that Mohanlal wanted Government to take overall financial responsibilities involved in the running of social welfare institutions, even those run by several voluntary agencies. Mohanlal was also reported to be in favour of employing persons who he thought, had the natural aptitude and urge to render selfless service for the suffering people. He had made a large number of *ad hoc* appointments without framing rules and regulations for their recruitment as required by Government regulations. Some officers in the UT Administration said that such *ad hoc* appointments were no doubt made in various departments of the Administration at that time, but the largest number of *ad hoc* appointments of such persons was done by Mohanlal in the Directorate of Social Welfare. They felt that Mohanlal expanded his department by recruiting comparatively low-paid

although qualified people in various institutions. This was perhaps responsible for some dissatisfaction amongst his staff in a number of institutions and welfare services. Some colleagues of Mohanlal felt that his desire was to convert voluntary organizations into government sponsored ones, and to put aside the managing committees of such institutions, so that desirable reforms might be introduced. It was further said that this led to the expansion of the Directorate without consolidation.

A few instances of such *ad hoc* appointments which Mohanlal made were reported by some officers. In one case "a candidate came to meet him personally. He gave an immediate interview; and being impressed by the personality of the man concerned, asked his officer to give him an appointment order to make him start working in the afternoon". It was further reported that the man who had come for the interview had not even made an application or brought one with him. In another instance, he was reported to have given an *ad hoc* appointment to a person and found that he was not the right type and so gave h m one month's notice after a few days. Again in a third case, he brought in a person who was already employed by a Voluntary Social Welfare Organization. The person concerned was a qualified social worker and joined the Directorate after resigning from the earlier job for this purpose. After some time, Mohanlal was said to have told him that the job he was assigned was not properly done. Then, the person was given another job. But the situation did not improve and the person was subsequently shifted to three more positions, one after another. It was alleged in this context that two of his trusted men in the department influenced him and this was responsible for the treatment meted to the persons selected by Mohanlal himself.

It was reported that there were about 500 posts of 90 categories filled in, to man over 20 institutions of various types during the time of Mohanlal. The Administration had appointed a Committee consisting of DSW and an Under-Secretary to evolve recruitment rules and to make emergency appointments. The Under Secretary found it difficult to convince Mohanlal of his point of view on some appointments, which he thought were irregular. As a result of these differences,

the Under Secretary said, "I refrained from attending the meetings held for new appointments". Most of the appointments were thus made by Mohanlal himself. As the staff began to increase in the institutions under the Directorate, it so happened that groupism and factionalism also began to develop. As reported by one of the staff members, "Mohanlal can do a lot of good for a person, if he could see eye to eye with him. Small groups of such people interested in their own individual welfare in the Directorate began to be formed. These gave rise to a number of rival splinter groups within the Directorate who, it was alleged, exploited the generosity of Mrs. Mohanlal to influence her husband and get things done. A time came when the intrigues and cliques in the Directorate assumed such proportions, that Mohanlal found it difficult to trust some of his staff.

Mohanlal was reported to be an individualist. At times, he took unilateral decisions on various issues; he was reported to have developed faith in two members of his staff, referred to earlier, who guided—or misguided him—on various issues. In one of the coldest seasons, Mohanlal found that the Children's House, the Poor House, etc., were devoid of blankets for the protection of the inmates. He consulted his colleagues and decided to buy a large number of blankets costing over Rs. 3,000. He immediately asked an officer to go round the town to various stores and produce 100 blankets in a day. Usually, for a big purchase of this type, there are definite administrative procedures laid down. Even for buying goods in bulk in emergency, it was obligatory that the head of a department should confer with the Civil Supply Department Head of the Government. Later, when the question of payment of the bills came up, the procedure adopted by DSW came up for objection, and the Administration had to get quotations, etc. with retrospective effect to regularise the deal.

Again, some officers of the Administration were surprised that Mohanlal was using the best clothing material and goods for running the hostels of the Welfare Institutions. For instance, he was said to have insisted that stainless steel utensils must be bought for the mess in the Children's Home, because "there exists a substantial budget for the purpose". For the clothing of the children, he was reported to have used the finest variety

of cotton cloth, although he himself wore simpler clothes. As reported by two officers, the expenditure per head in the Children's Home used to be more than Rs. 100 per month. The officers, while commenting on this, said that they would have liked to send their own children to such a Home.

Mohanlal's inclination towards religiosity and ritualism was reported to have been exhibited on one special occasion. A wealthy person owning a huge plot of land was said to have come forward, offering him a portion of land for starting an after-care Institution. According to some, the landlord took this measure after having heard that the Administration had decided to acquire his land for Government use. The Administration was embarrassed when Mohanlal accepted the donation and went ahead, presiding over the *havan* ceremony. He was reported to have performed the ceremony along with his wife. Commenting on this, one of the officers said, "On ceremonial occasions of this kind, it is usually the President of India and his consort alone, who have the privilege to preside over the ceremony. It would have been all right to have had the Chief Commissioner of the Administration preside over such a function, instead of one of the heads of the Department".

One of the local leaders, a person known for his long standing in voluntary social work was all praise for Mohanlal. He said, "It was a pity that a man of Mohanlal's devotion and expertise in his subject had to suffer a great deal on account of the officialdom and red-tape. Although funds were available, they were not given to Mohanlal as freely as he wanted to use them." In our country, he said, "it has been the tradition that leaders do not trust the bureaucrats and the bureaucrats despise the leaders. And, Mohanlal, by all appearances and actual behaviour was comparable to a leader. I was fully in agreement with Mohanlal on many issues. But sometimes he was irked on some issues. Once, he rebuked the parents of the children who misued the facilities provided to them in the Children's Home. He expressed anger at the parents of de-notified tribes for taking away their children from the Home for a few days, possibly for getting them involved in petty thefts, etc., and then returning them to the Home again". He added "Mohanlal, however, felt hurt when he found that the building in which the children were kept was in a dilapidated condition. In one or two cases, he

took the initiative and acquired houses on higher rent which he thought were suitable for the children in need of care". Speaking of himself he said : "As a person coming from the field of voluntary social welfare, I was surprised to learn that the secretariat staff of the Administration did not behave as they should with Mohanlal. The lower staff and also the Assistant Director in his department gave out secret information about the department to the outsiders. This created embarrassment to Mohanlal on various occasions; and, at one time, some such information had fallen in the hands of one MP who raised questions in the Parliament about the working of the Directorate". The leader added, "There were also certain delicate situations which developed at the later stage of Mohanlal's work in the Administration, when he had to go for approval of expenditure, appointment of lower staff, etc., to one of the Under Secretaries in the Administration, who was getting lower pay than himself."

Mohanlal, as we know, was to look after the care programmes in other Union Territories also. But his pre-occupation with the Directorate was said to be so great that he had not found it possible to do much in this direction. He, however, had paid one visit each to two other Union Territories. Early in 1961, the Home Ministry established the Central Bureau of Correctional Services as an advisory body; thereafter, Mohanlal's role as an adviser to othe· Union Territories was brought to an end. And, from this time onwards, detailed schemes and projects prepared by Mohanlal were referred to the Bureau by the Home Ministry. The Bureau thus turned out to be a consulting organization with which Mohanlal had to confer besides the Planning Commission, and also the Finance divisions of the Home Ministry and of the UT Administration.

The scheme for (1) Protective Home for Women and Girls; (ii) Welfare Services in Delhi; (iii) Payment of Gratuity to the Inmates of Beggars' Home, etc., had to be approved by the Ministry of Home, after due consultation with the Central Bureau of Correctional Services and the Planning Commission. It was reported that there were some differences of opinion on technical grounds between Mohanlal and the experts working in the Bureau. Mohanlal felt unhappy about this.

Early in 1962, the Administration began to review the position regarding the Directorate of Social Welfare. The Chief Secretary

and the Chief Commissioner who were holding office at the time of Mohanlal's coming to UT, had left. The previous Deputy Minister had also left the Home Ministry after the General Elections of 1962.

The new Chief Commissioner and the new Chief Secretary were watchful about the developments in the Directorate. One of the officers in the Administration said that the Chief Secretary wanted to be helpful in the growth of the Directorate, but when he discovered that there were intrigues within the organization, he decided to bring about some changes.

The status of Secretaryship which Mohanlal enjoyed gave him the opportunity to contact the higher-ups. The Administration now decided to vest the responsibility of the Secretaryship of the Directorate in the Chief Secretary as a sequel to many embarrassing incidents, some of which have been indicated earlier. On several occasions, Mohanlal was reported to have insisted on having his say on pressing administrative and financial issues. Once he was reported to have told the Under Secretary concerned, that he did not believe in the game of chess played by administrators and that since he knew his business better, his instructions should be followed.

The Chief Secretary, thereafter, delegated some of the responsibilities, of looking after day-to-day work of the Directorate to one of the new Under Secretaries. The new Under Secretary was reported to have developed some dislike for the manner in which Mohanlal wanted to get routine matters cleared. Mohanlal was upset because the powers earlier enjoyed by him, had been withdrawn and delegated to an Under Secretary who, he used to point out often, drew a lower salary. It was also generally known that the Deputy Director-cum-Administrative Officer of the Directorate was instigating the Under Secretary concerned. Both these officers came from the same State on deputation. It was further said that Mohanlal took active interest in seeing that his Deputy Director was reverted to the State Services after the expiry of the deputation period. There were some clashes reported between Mohanlal and the Under Secretary in the presence of the Chief Secretary also.

Meanwhile, the affairs of the Social Welfare Directorate had received adverse comment in Parliament. Questions were asked about mismanagement of (*i*) Probation Hostel for Girls,

(*ii*) Probation Hostel for Boys, and (*iii*) Purchase of equipment for the Directorate.

One of the decisions that Mohanlal had taken some time in December 1961, was to utilise a portion of the grant for the proposed Protective Home before the financial year came to a close. He had given orders for the purchase of equipment worth Rs. 10,000 and got the things. A question was asked in the Lok Sabha on January 25, 1962 about this purchase for a Home which had not been started. For the reply, the Home Ministry asked the UT Administration for relevant material. The Under Secretary, Delhi Administration, explained that the Home could not be started because the question whether it was to be run through a voluntary organization or by the Administration was still under consideration. It was explained that goods worth Rs. 10,000 bought for the Protective Home were utilized in the Poor House which was already in existence.

In the information supplied by the Directorate for "supplementaries", it was mentioned that the question of transfer of the responsibility of the Protective Home to a voluntary organization or otherwise awaited government's approval. The Home Ministry took exception to this statement because they had requested the Administration simply to clarify how the voluntary organization would be able to take care of the watch and ward arrangements. No decision was pending with them. In reply, the Under Secretary stated that the answer to the Lok Sabha question "was sent by the Administration as it was received from the Directorate of Social Welfare . For want of time, no effort to scrutinize the answer at our end could possibly be made." This was said to have led to the worsening of the already bad relationships between the Under Secretary and Mohanlal.

In the follow-up of the pending issue regarding the Protective Home, Mohanlal wrote a letter directly to the Home Ministry on September 26, 1962 reiterating : "The Administration still feels that voluntary agencies like the Association for Moral and Social Hygiene can and should be encouraged to shoulder the responsibility of running such institutions". He further explained that there should be no difficulty in providing adequate custodial and other requisite staff to prevent any kind of infringement of the conditions of the sentence, etc., as 100 per cent cost was to be borne by the Administration.

Continuing the chain of extension of the services of Mohanlal, the Administration requested the Ministry of Home on February 12, 1962 saying "the circumstances leading to the creation of the post of Director, Social Welfare, still exist". The sanction of Government of India was thus sought to continue the post upto March 1963. The Home Ministry conveyed the sanction on March 30, 1962.

In the meantime, a new post of the Officer on Special Duty was created by Delhi Administration for appointments of senior staff, etc. The OSD wrote to Mohanlal on January 13, 1963, requesting him to supply, if he had received a copy of the sanction of the Government of India for the continuation of the post of DSW for 1963-64. Mohanlal informed him that it was the Recruitment and Services Department which obtained the sanction and that he had not made the move nor had be received any sanction. He, however, requested that the R & S Department may take up the matter, and that the post of DSW may be converted into a permanent post.

Referring to the suggestion of Mohanlal to convert the post of DSW into a permanent one, the Finance Department (Budget) requested the OSD to give his comments. The OSD in his note pointed out, among other things, that in January 1962, the Administration had suggested to the Government of India that the post of DSW be included in the I.A.S. Cadre in the senior time scale, plus special pay of Rs. 200 p.m. and that the Government of India had not communicated their decision on the suggestion. In view of this, the OSD suggested that the Chief Commissioner's orders may be obtained on the continuance or otherwise of Mohanlal.

When this note was put up to the Chief Secretary, he remarked on January 26, 1963, "Shri Mohanlal will be completing 4 years and this is the normal term of deputationists. We do not have in that department itself officers to take his place but it should not be difficult to find some PCS officer in the Joint Cadre with background of social welfare work. The other day, the Chief Commissioner had indicated that we might in due time place these activities under the guidance of the Labour Commissioner".

This was put up to the Chief Commissioner who on January 28, 1963 observed : "Mohanlal has done much to

develop the work of the department but I think that his services should be replaced with the State Government on the completion of his tenure. Immediate action may be taken on this decision".

After having informed the State Government, the Chief Secretary told Mohanlal on February 6, 1963, that his services would be replaced at the disposal of his Government from February 28, 1963. Besides, he wrote, "The Administration appreciates the contribution made by you in the development of this new department in its initial stages and will continue to count on your cooperation and advice in future also". In reply, Mohanlal complained that he was given hardly 3 weeks' notice and that he would be inconvenienced, among other things, because his children were schooling in the UT. He, therefore, requested that he be continued until the end of May 1963, by which time his children's examinations would be over.

The OSD put up a note to the Chief Secretary on February 15, 1963, saying, "The request made by Shri Mohanlal for postponing his reversion to the end of May is reasonable and may be accepted. This will also give us time to obtain Government of India's decision regarding the inclusion of the DSW in the Joint I.A.S. cadre and look for a suitable officer to replace Mohanlal". He also observed : "Administratively also, some complications have arisen because according to our present decision, Shri Mohanlal should go from this Administration on February 23, 1963, and the last month of the financial (as well as Plan) year will require special attention. Secondly, there is a feeling that he is going in a manner which leaves an impression that the persons who managed to create a cloud of suspicion regarding the Directorate's working have succeeded. In view of this, we may perhaps agree to give an extension of 2½ months in consultation with Government of India and the State Government".

The Chief Commissioner indicated : "I have mentioned this small matter to the Home Minister. Shri Mohanlal is not under any sort of cloud. I appreciate the valuable work he had done under this administration as social welfare officer by developing with devotion and purposefulness a number of institutions. Many social workers of importance have a high opinion of him. In the case of officers on deputation, it is desirable that we should return them to their parent States on termination

of their tenure and this is being done in Shri Mohanlal's case". He further noted : "Since Shri Mohanlal requires another two months to enable his children to complete their academic year at their schools in Delhi, we may agree to his remaining with us till May 15. The State Government may be informed accordingly".

The UT Administration, under their internal reorganization scheme decided that the Development Commissioner would also be the Director of Social Welfare and would be aided by a Joint Director.

In view of this, the OSD wrote a letter to the Deputy Secretary, Home, on April 20, 1963, saying, "The DC would also hold the charge of DSW after the April 25, when Shri Mohanlal would leave office". The Deputy Secretary, Home, thereupon, conveyed the sanction of the Government to merge the post of DSW with that of the Development Commissioner with provision to delegate responsibilities to the Joint Director of Social Welfare-cum-Joint Development Commissioner with effect from July 1, 1963.

IMPLEMENTATION OF FAMILY PLANNING PROGRAMMES AT DISTRICT LEVEL

S. N. ACHANTA

"History was made at Jadcherla in the field of Family Planning"—broadcast All-India Radio on November 20, 1967. On that day, in Jadcherla, a small town in Andhra Pradesh, 1564 vasectomies were performed and a new record bettering the earlier one of 323 for vasectomies done in a day was set up.

This was the climax of the implementation of Family Planning programmes in a district in Andhra Pradesh over a period of two and a half years. This case study details the manner in which Family Planning programmes in this district were started from scratch and brought to a tempo at which it was possible to set up a world record, the various problems encountered in the implementation, the manner in which they were solved, the phases through which the programme passed and the personalities involved and the role played by the various personalities involved in the implementation. The period covered is between July 1965 and November 1967 approximately two and a half years.

On June 17, 1965 Shri S succeeded Shri B as District Collector. Shri S who was in his early thirties was thirteen years younger and ten to eleven years junior in service to his predecessor. He was an officer recruited to the Indian Administrative Service through competitive examination. This was Mr. S's first posting as District Collector and before he came to the District, he had spent three years in the Ministry of Finance, Government of India, two years as Under Secretary and Deputy Secretary in the State Industries Department and a year and half as Sub-Collector. He had an Honours degree in Biology.

The Collector attached the highest importance to population control measures and bringing about the Green Revolution in his district. He was firmly convinced that these twin problems were crucial to the economic development of the country as a whole. He was naturally entrusted with many other jobs. He had to

pay attention to the development of the irrigated area under completed projects. The construction of a building for the District Red Cross Society had to be taken care of. He was able to delegate work connected with routine Revenue Administration to the District Revenue Officer. This post had been recently created. However, law and order claimed a good deal of his attention. Still, because of his firm conviction, he was able to concentrate on the twin problems of Family Planning and measures for ushering in the Green Revolution, in addition to his other responsibilities.

Within a month of his taking charge, the Collector convened a meeting of the Executive Committee of the District Family Planning Association on July 20, 1965 in his office. It was felt at this meeting that, if the programme were to be successfully implemented, a more vigorous drive was called for. The membership fee was reduced from Rs. 5 to Rs. 3 and a membership drive upto September 1965 was launched. Sub-committees were formed for the District headquarters and for each of the sixteen *Samithis* for conducting the drive. The Chairman, Municipality and the Executive Officer, Municipality were to be members of the Committee for District headquarters, and the President, *Panchayat Samithi,* the Block Development Officer, the Doctor in charge of the Primary Health Centre were to be members of the respective Sub-committees. A Committee of direction for the whole District with the Chairman, *Zilla Parishad*, the District Health Officer, the Chairman, Municipality, etc., was also set up. The Collector requested the Chairman, City Municipality to spare a room, free of rent, in the Municipal Traveller's Bungalow and later in the Town Hall premises for opening a Family Planning museum. This was agreed to.

The drive for membership met with good response and within a period of three to four months, 1180 members, a membership larger than that of all other District Associations and in fact of the State Association, were enrolled.

Simultaneously with the membership drive, a survey of the attitude of people to Family Planning was conducted in eight villages with a total population of 15,000. The survey was conducted under the supervision of the District Family Planning Officers. The aim was to ascertain the attitudes and preferences of married couples having more than two or three children in

regard to Family Planning. The interviews were conducted by the Family Planning Educators and National Malaria Eradication Workers. The survey revealed that vasectomy operations were preferred to use of contraceptives. It also threw up some fears entertained by the people about the possible side effects of the operation. The most commonly encountered of these were that the operation would interfere with potency and their living a normal married life, that it reduced their capacity to work, that it might encourage adultery, etc. Catholics and Muslims felt that their religion did not permit any interference with nature, while Hindus expressed apprehension that it was undesirable for the majority community alone to adopt Family Planning, while other communities multiplied unchecked.

The State Government at this time began to lay emphasis on vasectomy and, particularly on the IUCD (the Loop), as the most promising methods of Family Planning, to be propagated. The District, however, did not have a Mobile Surgical Unit of its own for conducting vasectomies. The Mobile Unit from Hyderabad was to visit centres at which a hundred cases were registered. At the Annual Collectors' Conference, the Collector strongly pleaded for the allotment of an independent Mobile Surgical Unit for his District. On January 3, 1966, a Mobile Surgical Unit for the District was formed.

It was decided that a Family Planning Week should be celebrated all over the country. The Executive Committee of the District Association planned to have their first Annual General Meeting between 18th and 24th December, 1965 to coincide with the inauguration of the All-India Week and to invite some distinguished persons from Hyderabad to participate in the celebrations.

As the membership of the Association grew and as work in the field was initiated, leading non-officials began to aspire for the Presidency of the District Association. The District Health Officer was inclined to have a non-official as President instead of the Collector, while his senior colleague, the District Medical Officer thought otherwise. The day before the Annual General Meeting, the Chairman, *Zilla Parishad,* the District Medical Officer and the District Health Officer saw the Collector and put in feelers that a non-official might be the President while the Collector could be the Patron of the Association. The Collector

told them that as Patron he would not be able to take an active part in the activities of the Association. Some names for the various office-bearers of the Association were agreed to be sponsored at the meeting next day. When on December 19, 1965 the Collector entered the Annual General Body Meeting, there was some tension. When the nominations for Presidency were called and the District Medical Officer suggested that the Collector should continue to be President, one of the *Samithi* Presidents stated that the Collector was an extremely busy man, that he had been working eighteen or more hours a day, and that he might be relieved of the burden of the Family Planning Association. The Collector thanked the member for his concern and thoughtfulness to give the Collector relief, but made it clear that he was not unwilling to shoulder the additional burden, and that as Patron, the Association would not have the benefit of his active association. He also indicated that some one else could take over after the Association was put on its feet. There was a hush and one or two members immediately said that the Collector alone should be the President. One of the *Samithi* Presidents was elected Secretary while the District Health Officer Dr. R was elected Joint Secretary.

The celebration of the All-India Week itself was elaborate. The Collector's wife, Mrs. S opened a Family Planning exhibition and the Director of Public Health presided at a seminar which was attended among others by the President of the State Family Planning Association. In the public meeting in the evening, the State's Finance Minister inaugurated the week. The Chief Secretary to Government presided. The Special Secretary, Planning and the Special Secretary, *Panchayati Raj* of the State Government were also on the dais. The meeting was attended by a few thousand people.

The Collector welcomed the gathering and when he said that it was planned to perform 3000 vasectomies in the next three months, the Hon'ble Minister interrupted the Collector's speech and said "Mr. S, 3000 won't do." The Collector explained to the gathering that though the Hon'ble Minister was of the opinion that the target was too low, it was fixed keeping in view the likely response and the fact that no vasectomies whatever were done during the year 1963-64, only 94 were done in the year 1964-65 and 412 in 1965. The Chairman, *Zilla Parishad*

and the District Health Officer who spoke referred to the Hon'ble Minister's intervention and supported the target indicated by the Collector.

The next step in the programme was to find a good surgeon for the Mobile Surgical Unit. The District Health Officer suggested one Dr. K and wondered whether he could be spared. The District Medical Officer said Dr. K was unwilling to take up Family Planning work. The Collector asked the District Medical Officer and the District Health Officer to bring Dr. K to him so that he could persuade him to join the Mobile Surgical Unit. To Dr. K, the Collector later said that Family Planning work was the most vital, the most likely to bring him recognition and even opportunities to go abroad. He also said that if he were sitting in the Secretariat, he would give more weight to Family Planning work of the doctor than the routine treatment of so many cases. Dr. K, who then joined the Mobile Surgical Unit became one of the first doctors in the State to perform 1000 vasectomies.

A programme for the next three months was drawn up and the Collector wrote to all the *Samithi* Presidents and Block Development Officers. An appeal was also sent out on the non-official side. The *Samithi* Presidents, however, vied with one another in enlisting cases for the operations. The campaign was a great success. Ten doctors of Primary Health Centres were trained in vasectomy in the first camp. Later twentyone more camps were held and patients came from 800 different villages. The response from the town was very poor. In some areas, there was no progress and there was virulent anti-propaganda by the Arya Samaj against Family Planning. This was brought to the notice of Government. In all in eighty days, 3305 operations were performed against the target of 3000.

From one area, information reached the Collector that a *Lambada* who was operated upon for vasectomy died subsequently. The Collector deputed the District Health Officer to personally investigate the cause of death. It was found that the *Lambada* had died of pneumonia, a cause entirely unrelated to the operation. This was confirmed by the *Samithi* President who took an active part in organising the camps in his area. However, on compassionate grounds, the Collector sanctioned Rs. 500 from funds placed at his disposal as a housing grant to the widow and

5 acres of land. In more than ten thousand cases in the District during the previous three years, this was the only instance of its kind.

The Family Planning work done in the District was commended by the Government of Andhra Pradesh, a unique gesture for work in any field and certainly in the new field of Family Planning. This recognition greatly encouraged the Collector, the District Health Officer, the *Samithi* Presidents, Block Development Officers and doctors who took part. It was said some doctors got the Government's letter of commendation framed and displayed in their consulting rooms. Having captained the campaign to a successful conclusion, the Collector handed in his resignation of the Presidentship to the District Health Officer. The latter was reluctant to accept it and said they could not carry on without the Collector. The Collector persisted in pressing his oral resignation. The Family Planning work in the District almost came to a halt. The non-officials who were keen only a few months earlier on holding office did not show much interest. It was significant that since the Collector resigned and up to the time of writing (March 1968) no meeting of the District Family Planning Association was held.

The focus shifted to a formally set up District Reviewing Committee which was constituted by Government with the Collector as *ex officio* Chairman towards the end of the year. This Committee included also the non-officials who tried to dislodge the Collector from the Association though officials constituted a preponderant majority.

There were two State-level seminars, one in April and another in October 1966 during this period. The third State Family Planning Conference was conducted on April 15-17 ~~at Hyderabad~~ and it was inaugurated by the Minister for Finance of the State Government. It was attended by the District Medical Officer, the District Health Officer, the Collector's wife Mrs. S who as Chairman, *Andhra Mahila Sabha* was running an Auxiliary Nurses' Training Centre and was taking interest in Family Planning work, a *Samithi* President and two doctors from Primary Health Centres. It was reported that the *Samithi* President who was the Secretary of the District Family Planning Association objected to the proposal of the Seminar that the Collector be made *ex officio* President of the

Family Planning Association.

The second seminar was a zonal conference of Collectors, Chairmen, *Zilla Parishads*, Chairmen, City Municipalities, District Medical Officers, District Health Officers, the Heads of the medical and health Departments, regional Family Planning Officers of the Government of India and representatives of the voluntary organisations, etc. It was inaugurated by the Chief Minister of Andhra Pradesh and was later addressed by the Union Deputy Minister for Health and Family Planning.

A notable absentee at the meeting was the Chairman of the *Zilla Parishad* of the District in question. Among those who attended the meeting was the Collector's wife Mrs. S who got an invitation from the State Government as she had in the meantime started running a Family Planning Clinic under the aegis of the *Andhra Mahila Sabha* with Government of India assistance. At this meeting, Mr. S, the Collector pleaded for incentives for doctors doing the operations, for promoters who brought patients and, from the experience of his wife, who as Chairman of a voluntary organisation was running a Family Planning Clinic, for greater facilities like supply of drugs, etc., to voluntary organisations doing Family Planning work. He said greater attention could be paid by doctors themselves, as patients who went to them would be receptive to doctor's advice. The Chairman of the City Municipality admitted that the response of the urban areas was very poor and advocated that a law should be enacted to make sterilisation compulsory. Representations were made that posts of Lady Medical Officers and para-medical personnel which were vacant should be filled up. The Health Secretary detailed the steps the Government were taking in this regard. He explained that workers of Maternity and Child Health Clinics and those of the National Malaria Eradication programme would be closely associated with the programme. Though these discussions greatly influenced Government's policy, no proceedings as such of the meeting were issued. Soon after the Seminar, Dr. R, the District Health Officer who played a very active part in the implementation of the programme, was selected for a WHO Fellowship for advanced study in Czechoslovakia.

The subsequent development was that a Family Planning Bureau to which the earlier Mobile Surgical Unit was attached

was formed for each District and one Dr. S. S. was appointed as the District Family Planning Officer. He was asked to work directly under the Collector. Simultaneously reviewing Committees were set up at the District, and *Samithi* levels. The District had the Chairman, *Zilla Parishad*, the District Medical Officer, the District Health Officer, the Secretary, *Zilla Parishad* the District Family Planning Officer, etc., as members and the Collector as Chairman. The Committees at the *Samithi* level were presided over by the *Samithi* Presidents and had the Block Development Officers and the Primary Health Centre doctors as members.

Dr. S. S., the new District Family Planning Officer was a systematic person though he did not possess the bubbling zeal of Dr. R, the District Health Officer. He, however, systematically approached the Collector for fixing up meetings every month and promptly issued the proceedings. Only after the formation of the District Reviewing Committee and the appointment of the District Family Planning Officer were regular reviews of the progress of the programme conducted and difficulties tackled methodically. The *Samithis* were requested to form the block level committees wherever they were not formed, and were asked to conduct their meetings regularly. The progress achieved in the various Primary Health Centres and in *Taluka* Hospitals was critically reviewed from time to time. It was noted that, by and large, the Civil Hospital at the District Headquarters and the *Taluka* Hospitals which were directly under the charge of the Superintendent and the District Medical Officer respectively were lagging behind the Primary Health Centres which were supervised by the *Samithis*. The doctors in these hospitals were almost indifferent to Family Planning and even the doctors in Primary Health Centres who took a little more interest did not involve themselves to the extent desired. On one occasion, the Collector had to tell the District Medical Officer in the District Family Planning Reviewing Committee that he may tell the doctors that they would get a bad chit in their annual confidential rolls from the Collector, if they did not take more interest and achieve the targets fixed for them. The Collector who almost never flaunted his authority was forced to this extremity by the fact that doctors with a few brilliant exceptions, were not as alive to their responsibilities as necessary

in the Family Planning programme. Their typical attitude was that if anyone came to them for help or was brought to them, they would attend. They rarely took the initiative in canvassing for cases even among those who came to them with other ailments. This picture materially altered after August 1967, when an incentive of Rs. 5 per vasectomy done was paid to the doctor, Re. 1 for his assistant, besides Rs. 2 for the promoter who brought the case. When the campaign was in full swing, some doctors earned even two to three thousand rupees in a month by way of these incentives. It was noticed that cases of one area were taken to another to boost up their achievement. The person operated upon was paid Rs. 12 to compensate for loss of wages and an expenditure of Rs. 10 could be incurred on transporting the case, feeding, for drugs and other incidentals. Thus each vasectomy cost the exchequer Rs. 30.

At this time, the State Government as well as the Government of India tended to give a higher priority to the IUCD (loop insertions) than to other methods including vasectomy. The experience in the District, however, was that several women were not in a fit condition to receive the loop, that, in a large percentage of cases, the wearing was accompanied by bleeding, aches and pains. In quite a few cases, the women returned to have the loops removed. There was also a feeling that some women because of the incentive bonus of Rs. 2 or so got the loop and within a few days got the device removed.

The District Family Planning Reviewing Committee expressed its opinion that it was more difficult to get cases for IUCD than for vasectomy. The Collector requested the doctors in the Committee to treat all women who were willing to receive a loop, but were medically considered unfit to wear at the time. He also suggested that, as there were side effects in more than 50 per cent of the cases, treatment be given preventing such occurrences as bleeding in every loop case as a prophylactic measure. The doctors were requested to advise persons having three or more children from among their patients to take to Family Planning. Sign boards were put up at all hospitals that Family Planning advice was available, free. There was absolute unanimity in all the deliberations of the District Reviewing Committee, the Chairman, *Zilla Parishad* supporting all such suggestions. To some meetings Block Development Officers

who were in town were invited and their suggestions were taken. Graphs and charts depicting progress, prepared by the District Committee were shown to them with a request that similar methods be adopted in their *Samithis*. One or two Block Development Officers expressed the view that after-care of persons operated for vasectomy was not adequate. Steps were taken to rectify this defect.

The District Reviewing Committee advocated film shows, talks and door-to-door canvassing, intensive as well as extensive approaches for popularising Family Planning. The Collector's wife, who started running a successful Family Planning Clinic from September, 1966 under the aegis of the *Andhra Mahila Sabha*, visited several villages showing films and talked to villagers. To predominantly Muslim areas, she took Muslim Officers and leading Muslim citizens to talk to the people. She was helped by Revenue officials and *Sarpanches* extended her a warm welcome. The District Public Relations Officer also arranged several film shows on Family Planning directly and through the Block Development Officers. Two movies of the Family Planning work were shot in colour in the District and they were also exhibited from time to time.

From April, 1966 when the Collector resigned his Presidentship of the District Association to the end of 1966, there was virtually a slump in the number of vasectomies done. Only some 500 operations or so were done in 9 months compared to the 3305 in the three months at the beginning of 1966.

The formation of the District Family Planning Reviewing Committee in the District placed the responsibility for the programme on the shoulders of the Collector besides the other members of the Committee. The Collector made frequent enquiries about the progress of the Family Planning work in his tours.

Appeals were also made to leading non-officials in the *Zilla Parishad* Standing Committee Meetings and to officials in the Coordination Meetings, presided over by the Collector. The District Health Officer lost no opportunity of addressing these meetings and appealing to those present. The Chairman, *Zilla Parishad* also used to speak emphasising the programme. The *Samithi* Presidents with a few exceptions took a great deal of interest in the programme even before they were formally

made Chairmen of the Block Level Reviewing Committees. The State Government instituted prizes for the *Samithi* with the best performance and a healthy competition prevailed among *Samithi* Presidents and the Block Development Officers. They would frequently mention their performance in Family Planning to the Collector when they met. The *Samithi* Presidents and Block Development Officers frequently split up the targets of the Block among the Village Level Workers and Extension Officers, issued written instructions and reviewed the progress achieved by them in their monthly staff meetings.

As stated earlier, the District Family Planning Officer had no direct contact with the District Medical Officer, the Superintendent of the Headquarters Hospital or the District Health Officer or indeed with the fifty or so doctors spread over the District. The co-ordination of work among the various branches of the medical or health personnel was also the responsibility of the Collector. Occasions were many when the District Health Officer or District Family Planning Officer would request the Collector to ask the District Medical Officer or the Superintendent of the Headquarters Hospital, both of whom being civil surgeons were senior to the District Health Officer and the District Family Planning Officer, to spare doctors, vehicles, etc., for Family Planning work. On one occasion the District Medical Officer requested the Collector to ask his colleague, the Superintendent to spare men and materials for Family Planning work. The Superintendent had occasion to mention to the Collector that he resented the tendency of the District Medical Officer to throw his weight about but continued to co-operate because of the magnitude of the work and the involvement of the Collector. There was actually acrimonious correspondence going on between them in some other matter. In fact, there had been very ugly scenes between the District Medical Officer and the first Superintendent of the Hospital regarding the occupation of the Superintendent's quarters, resulting in the transfer of one of them out of the District. A Superintendent at one stage refused to make the Lady Medical Officer available to the District Family Planning Officer, as it inconvenienced her and was said to have dislocated the work in the Hospital, till the subject came up in a District Family Planning Reviewing Committee and was patched up.

This arrangement continued till a major re-organisation involving merger of the Medical and Health Departments took place in July, 1967. After the merger, the District Family Planning Officer and the District Health Officer were placed under the District Medical Officer who was re-designated as District Medical and Health Officer and they became Deputy District Medical and Health Officers in charge of Health and Family Planning. The direct *de jure* connection between the District Family Planning Officer and the Collector ended though in fact Dr. R, the *ex* District Health Officer who returned to the District after his training abroad as Deputy District Medical and Health Officer continued to deal with the Collector directly as if there had been no change. The District Medical and Health Officer, an old gentleman who was to retire in a few months tended to lean rather heavily on his deputies and did not mind this direct contact. On one occasion, the Collector, and later, the Governmet through general instructions, had to tell the District Medical and Health Officer that because of official etiquette and the need to respect hierarchy that he should take more interest in Family Planning work and be well posted with information about release of funds, state of the programme in different areas and generally be responsible for its implementation.

After the merger of these branches, the Collector's co-ordination in the medical field was that between the District Medical and Health Officer and the Superintendent of the Head-quarters Hospital. The Collector, as the later Jadcherla story would reveal, was in correspondence and in telephonic touch with the Hon'ble Health Minister and the Secretary, Health with whom the District Medical and Health Officer was not expected to deal directly, and with the Director of Medical and Health Services between whom and the District Medical and Health Officer there was considerable official distance. The coordination between the Medical and Health departments on the one hand and the *Samithi* Presidents, Block Development Officers, Revenue Divisional Officers, Tahsildars, the Engineers of Roads and Buildings and Electricity and other District Officers who came into the picture had necessarily to be done by the Collector. This will be referred to again later on.

The programme followed an uneventful but steady

course between November, 1966 when the District Family Planning Committee was constituted and August, 1967. The meetings reviewed the progress, and progress, though not spectacular, was made in camps systematically conducted by Dr. S. S., the District Family Planning Officer. He, with the help of the Doctor in charge of the Mobile Surgical Unit got about 3,440 vasectomies performed in different blocks. There was not much progress in the IUCD programme. Apart from the lack of popularity of the loop, the work was greatly handicapped by the absence of the Lady Medical Officer in the Mobile Surgical Unit. Several requests were made to Government and the Director of Medical Services for getting the post filled up. Several times, the District Committee resolved that, in the absence of the Lady Medical Officer, the targets fixed for the IUCD could not be achieved. Several efforts were made to post lady doctors by the Government and the Directorate, but all in vain. The doctors posted never joined. The Lady Medical Officer who was working in the Headquarters hospital and who was actively assisting the *Andhra Mahila Sabha* loop camps and those of the District Family Planning Officer, when posted as the Family Planning Lady Medical Officer, went away on leave and left the district.

In May, 1966, Dr. K, the doctor in charge of the Mobile Surgical Clinic, was transferred. The doctor who succeeded Dr. K was a novice and, from that point on, for quite some time the Mobile Surgical Unit did not command the lead which it did earlier. Some doctors working in Primary Health Centres did quite well and even in the Mobile Unit, other doctors like the District Family Planning Officer took a very active role in conducting operations.

In July, 1967, one Mr. G, an I.A.S. Officer who was working in this District was posted as Deputy Secretary in the Secretariat in charge of Family Planning. He promised all possible help to the Collector. The Collector also felt confident that proposals from his District would not be lightly turned down but would be given the most sympathetic consideration. He also felt that innovations suggested by him could have a greater chance of being pursued at the Secretariat and any special relaxation of rules that might occasionally become necessary in the quick implementation of the programme would be readily given.

So when Dr. R, the *ex* District Health Officer completed his WHO Fellowship and returned to India, Mr. G inquired of the Collector whether he would like Dr. R to be posted as District Family Planning Officer of his District in place of Dr. S. S. The Collector was in a dilemma because Dr. S. S. had been there only a short time and was pursuing the programme systematically. Dr. R, on the other hand, was an ebullient individual, a doctor with a sense of mission. The Collector felt that it would not be fair to replace Dr. S. S. with Dr. R as Dr. S. S. had been there for barely nine months and given no cause for complaint. So he told Mr. G, the Deputy Secretary, that he would not request for Dr. R's posting to the District.

Dr. R, who was resourceful however, got himself posted as District Family Planning Officer of the District (to which incidentally he belonged) in place of Dr. S. S. in September, 1967. After this things started happening.

The first notable event was the celebration of a special Family Planning fortnight in the latter half of September, 1967, throughout the country. The target fixed for the District for the fortnight was 1600 vasectomies or so—the figure by which the achievement of the District up to that date fell short. Dr. R saw the Collector and discussed the strategy to be adopted. Dr. R was in the habit of dropping in at the Collector's bungalow after ten or eleven in the night when the Collector was comparatively free. Dr. R wanted to concentrate all his efforts and those of the Mobile Unit on one *Samithi*. This had been proposed by the State Government. The Collector did not think that all 1600 operations could be performed in one area with a population of a lakh or so. He, therefore, suggested that, while the Mobile Unit concentrated in one Block, one other block should be asked to put in equally strenuous efforts with the help of the Primary Health Centre doctor of the area and other doctors who would be spared and that the *Andhra Mahila Sabha* Family Planning Clinic should be asked to launch a drive under the guidance of the Collector's wife in and around the District Headquarters town.

To make success doubly certain, the Collector further suggested that all other *Samithis* also should be requested to give of their best in the fortnight. This reasoning appealed

to Dr. R and the strategy was adopted. It also paid rich dividends for not only was the target for the fortnight reached but it was also exceeded by a large margin. Never before in any fortnight were 1971 vasectomies performed in the District. In the block in which the Mobile Unit worked, 600 vasectomies were performed. An equal number was performed in the other selected block and the Andhra Mahila Sabha camp yielded 450 operations. All the remaining 13 blocks together contributed 320 cases. The work was also commended by the Chief Minister of Andhra Pradesh in a letter he wrote to the Collector. It was said that five out of the twenty Collectors received such commendatory letters. All this was to spur the Collector and his colleagues to greater effort and to the climax of implementation of Family Planning programmes in the District.

During the Family Planning fortnight, in the adjacent district of Hyderabad in a vasectomy camp at Shamirpet, 323 vasectomies were performed in a day and a new national record was set up. It was said that this bettered the records earlier set up by Maharashtra, Madras and Kerala States. This received a good deal of publicity in the regional papers. A radio report of the camp was also put out by the Hyderabad Station of All India Radio.

Dr. R, the Deputy District Medical and Health Officer (Family Planning) conceived the idea of bettering this record. He came to the Collector one evening in October, 1967 and broached the subject. He told the Collector that this was the opportune time for the District to set up an All-India Record. He also mentioned to him that he had discussed the matter with the Chairman, *Zilla Parishad* who asked him to discuss the proposal with the Collector before proceeding further. The Chairman also told Dr. R that, if a suitable date was fixed, the Chief Minister could be invited to attend the function. Dr. R requested the Collector to request Dr. S, the Superintendent of the Headquarters Hospital to co-operate in organising the camp. Dr. S and Dr. R had been classmates in the Medical College. Dr. R felt Dr. S would help but thought that the Collector should also speak to him.

The Collector welcomed the idea of performing the largest possible number of vasectomies in a day for the effect it would have in capturing people's imagination. He readily promised

all assistance. Later that day, he met Dr. S and requested his help. Dr. S readily agreed to do whatever was required of him.

Jadcherla was chosen as it was the turn of that Block to have such a camp. Later it was confirmed as Jadcherla was more central than the District Headquarters, as several roads met there and as the Block Development Officer of that *Samithi* promised to register 600 cases for the camp.

In a couple of days, the Superintendent, Dr. S and Dr. R paid a visit to Jadcherla to examine the facilities available. They reported the results of the visit to the Collector. At that meeting, the Collector told the doctors that maximum care should be taken about cases that might develop serious complications. The Collector had heard that procaine penicillin produced shock in some vasectomy cases done in camps and as the camps were in far-off villages, at times even the doctors were nervous. He said every patient should be tested for sensitivity to penicillin, prior to the operation. He also mooted the idea of conducting the first tubectomy camp in the Telengana region of the State. This idea was discussed by the Health Secretary with the Collector and with the doctors during his visit for the Family Planning fortnight. The Health Secretary had said that tubectomy operations were done on a large scale in camps in Gujarat, and that they were planning a large tubectomy camp at Gannavaram. Also some high officials of the Indian Medical Association at Hyderabad promised all help to the Collector, if he organised a tubectomy camp. The complaint of the Indian Medical Association officials was that their services were not being utilised by Government, though freely offered. (One prominent doctor told the Collector that though an offer was made that family planning work would be done free for an hour each day in her well-known and centrally situated maternity hospital, if a board to that effect was put up by Government in the Family Planning fortnight, no such board was put up. This complaint, a rather serious one, was promptly passed on by the Collector to Mr. G, his Deputy Secretary friend in the Health Secretariat).

The Collector at about that time also told Mr. G, the Deputy Secretary who was keenly involved in planning the tubectomy camp at Gannavaram that a large vasectomy camp

was being planned in the District, that help from Government was necessary, but that the matter might be kept confidential till all the details were worked out and the organizers felt confident about putting the plan into execution. Mr. G promised all possible help from Government. Unfortunately, he had to go on leave for personal reasons, a few days later, at the crucial stages of planning and running the camp and he heard of the success of the camp from a colleague at Madras. As it happened, the Deputy Secretary having gone on leave, it was to the Secretary and the Director of Medical and Health Services and even to the Health Minister that the Collector had to turn for help.

The first step in organising the camp was writing to the Presidents of *Panchayat Samithis*, the Block Development Officers and doctors of Primary Health Centres to register cases for the proposed camp. It was recognised that the success of such a camp would depend entirely upon the number of volunteers for undergoing the operation, as performing the operations safely and under ideal conditions could be arranged without much difficulty. Registration and obtaining persons for undergoing the operation therefore was recognised as the main factor from the outset. Letters were written to all the Presidents of the *Panchayat Samithis*, Block Development Officers and others on October 16, 1967. In that letter, a target of 800 was set out and this was sub-divided among the various *Samithis*. It was hoped that a minimum of 600 vasectomies could be performed, if 800 were registered and the then record could be roughly doubled. The Block Development Officers were requested to report the progress of registration at weekly intervals to the Collector. The Chairman, *Zilla Parishad* also wrote to all the *Samithi Presidents* to do their best for the camp.

On that day, October 16, 1967, a meeting of all Revenue Divisional Officers and Tahsildars was convened for discussing some matters of revenue administration. Mr. S took the opportunity for exhorting them to do their best for the Family Planning camp. He also gave them targets for registration. It was the first time revenue officials were involved in the Family Planning programme in the District. Revenue Divisional Officers were requested to co-ordinate the work of the Block Development Officers and Tahsildars as also all arrangements

of registration, transport, etc., of patients within the revenue division.

One evening, the District Medical and Health Officer and Dr. R, the Deputy District Medical and Health Officer (Family Planning) came to see the Collector. In the discussion the Deputy District Medical and Health Officer thought that 1000 operations could be done between 8 a.m. and 6 p.m. Mr. S then asked them why operations could not be performed from midnight to midnight, covering a period of twentyfour hours. As it was the record of vasectomies performed in a day, he was of the opinion that this would offer the maximum scope for conducting the largest number of operations with the greatest margin of safety. Dr. R initially did not favour the suggestion. Mr. S advised that, if necessary, two shifts or even three shifts of doctors could be used. After some further persuasion, Dr. R agreed to the suggestion. As it was felt that even 2000 operations could be performed in twentyfour hours with the resources available, tentatively a target of 1000 vasectomies for the day was fixed. The Collector, however, emphasised, time and again, that the doctors should operate on each person at the camp taking their own time, as if he were the only person to be operated that day. He emphasised that safety should be the paramount consideration and the camp could not afford even a single mishap among the 1000-1500 operations planned. He exhorted all the doctors on these lines, when he addressed them on November 6, 1967. On the midnight of 19th/20th November when the camp started, he requested Dr. R to go and tell every doctor "to go slow" and "to take their own time." He told a few doctors himself to take it easy.

On October 25, 1967, the Collector made a fervent appeal to Block Development Officers who were called for a meeting. He exhorted them to do their best for the success of the camp. The meeting was also addressed by Dr. R, the Deputy District Medical and Health Officer (Family Planning). The reports of the Block Development Officers were encouraging and it appeared that 1500 operations could be performed. The question of inviting a high dignitary to attend the public meeting arranged in connection with the camp was discussed at this meeting. It was hoped that the Governor or the Chief Minister would grace the occasion. Mr. S telephoned the Private Secretary

to the Chief Minister during the course of the meeting. The Private Secretary told him that the Chief Minister would be out of the country at that time and would not be able to come. After this was known, in consultation with those present, it was decided to invite the Governor himself. Mr. S telephoned the Secretary to the Governor and told him about the proposed camp at which 1000 vasectomies would be performed in a day and requested him to propose to the Governor and his wife to visit Jadcherla. The Governor's Secretary, who was on friendly terms with the Collector, said he would mention the proposal to the Governor. It was originally planned to have the camp around the fourteenth of November so that villagers would not be pre-occupied with agricultural operations, and also those who would be operated would be fit to attend to harvesting operations late in November. As the date did not suit the Governor, twentieth November was fixed.

A day or two later, the Health Secretary telephoned Mr. S to find out about the camp proposed by him. He told the Collector that he heard of the camp from the Governor's Secretary and the Governor wanted to find out whether it would be a fit occasion for him to attend. It was somewhat embarrassing for the Collector that the Health Secretary got his first intimation of the vasectomy camp from the Governor and not from himself. The Collector told the Health Secretary his plans for the camp and explained that he was keeping the plans confidential till he felt certain that they could be implemented. He also told him that the Deputy Secretary (Health) had been told about the project. The Secretary, who was an extremely helpful and courteous person and who, having seen the Family Planning work in the district, made it no secret that he had a good opinion of the Collector, was a little sceptical of 1000 operations being conducted in one day under proper aseptic conditions. He said that a Deputy Director of Medical and Health Services had visited some camps in a neighbouring district and found that the same surgical towels were being repeatedly used and that, generally, the conditions at those camps were unsatisfactory. The Collector assured the Health Secretary that maximum possible care would be taken and that, if he wanted any help, he would approach the Director of Medical and Health Services or the Health Secretary. The Secretary in the end said that he would

inform the Governor that it would be in the fitness of things for him to visit the camp. He also promised his fullest co-operation. He also said, "Dr. B, the Director of Medical and Health Services is seated before me and he also promises his fullest co-operation." A few minutes later the Governor's Secretary telephoned the Collector and confirmed the Governor's visit.

A meeting was convened on November 3, 1967 to review the registration of cases and finalise the arrangements for the operations, transport, lodging and feeding of patients and arrangements in connection with the public function. It was held at the Collectorate and was presided over by the Collector. After saying a few words, he requested the Chairman, *Zilla Parishad* to address the meeting. In the course of his address the Chairman, *Zilla Parishad* said that the credit for Family Planning should not go only to officials and that the non-officials should share in it by working hard to register cases. He promised his co-operation in the venture.

Mr. S gave an account of the work so far done, the encouragement received from the Governor's Secretary, the Health Secretary, the Director of Medical and Health Services and others and exhorted those assembled to do their very best to make a success of the camp. In particular, he emphasised the great need to register a very large number of cases so that the target set out could be reached. When he reviewed the progress of registration, he found that 2690 people had been registered till then. He also emphasised that, besides safety of patients, the next most important consideration should be economy in expenditure as there was no merit in setting up a record, even an impressive one, if money on a large scale had to be spent.

The Collector emphasised that as the task was big, initiative and resourcefulness should be shown by all the officials and formalities should not be allowed to impede progress. A young Assistant Engineer in charge of electricity said due requisitions for service connections should come from various authorities, that his people could not undertake the task of internal wiring of the operation theatres, etc. The Collector asked him where his Divisional Engineer was and, on being told the Divisional Engineer was out of station, he told the Assistant Engineer that he would discuss matters connected with electricity with the

Divisional Engineer. Later on in the meeting he told the young Assistant Engineer that the electricity arrangements were going to be made in any case and they were going to be made by the staff of the Electricity Board itself and that the Assistant Engineer himself could have taken part of the credit by adopting a more helpful and resourceful attitude. He also told the Assistant Engineer that, for a camp of this magnitude, no one could stand in the way and if there was need, he would obtain orders from the Chairman of the State Electricity Board. This part-authoritarian and part-paternal advice had a good effect on the engineer. However, he saw much less of that Assistant Enginer in connection with this camp. The Divisional Engineer, who was a seasoned officer, deputed another experienced Assistant Engineer for looking after the arrangements, and extended his unstinted co-operation. The camping places of the patients were electrified, and the operation tables were all fitted with lights at the height desired by the surgeons; the operation theatres provided with two standbye generators—it took exactly thirty seconds on the day of the camp when operations were in progress for an alternate supply to be switched on, when the main supply failed, which surprised doctors, as even the main operation theatre of the District Headquarters hospital did not have such standbye equipment. No one could have wished for better electrical arrangements.

At the meeting on November 3, 1967 several committees were constituted for looking after various arrangements. Those constituted included a Reception Committee with the Chairman, *Zilla Parishad*, President, Jadcherla *Samithi*, the Member of Legislative Assembly for Jadcherla, the *Sarpanches* and the Revenue Divisional Officer concerned; a Transportation Committee with the Superintendent of Police, the District Treasury Officer and the Motor Vehicle Inspector, a Food Committee with the District Supply Officer, the Assistant Grain Purchasing Officer, the Tahsildar concerned and the Accounts Officer of the *Zilla Parishad*, a Committee for arranging the public meeting with the Executive Engineer, *Zilla Parishad*, the Tahsildar and the Chairman of the local Market Committee, a Committee for the arrangements for the Governor's camp with the Executive Engineer, Roads and Buildings, the Revenue Divisional Officer and the Tahsildar, a Medical, Health and Sanitary arrangements

Committee with the District Medical and Health Officer, Superintendent, Headquarters Hospital, Deputy District Medical and Health Officer (Family Planning), Deputy District Medical and Health Officer (Health), Deputy District Medical and Health Officer (Medical) and the Unit Officer, National Malaria Eradication Programme, a Committee for reception of patients with Secretary, *Zilla Parishad*, District Extension Educator, Statistical Assistant (Family Planning), four Block Extension Educators and a Committee for entertainment with the Public Relations Officer and the Assistant Radio Engineer. The Collector was the Chairman of all the Committees.

A Committee was also constituted for each Revenue Division with the Revenue Divisional Officer, the Presidents, *Panchayat Samithis,* the Block Development Officers and the Tahsildars in the division as members.

The constitution of the various committees helped decentralising responsibility. Though some committees did not function at all and most never met or functioned as committees, some of the members of the various committees bore the brunt of making the required arrangements.

On November 4, 1967 the Collector wrote demi-officially to the Director of Medical and Health Services a long letter, listing his requirements. As there were no funds in the District to pay the patients for loss of wages, etc., the Collector asked for one lakh rupees which was to be spent in accordance with the orders in force of Government at the rate of Rs. 30 per vasectomy. He also requested that a Family Planning exhibition might be organised between November 18 and November 21, 1967 at Jadcherla and that some Family Planning publicity units be made to tour the District, from November 10, 1967. For some reason or other, it was not possible for the Directorate to arrange the exhibition though all preparatory arrangements had been made by the district authorities—and also no publicity units were spared. The loan of the services of ten surgeons who were reported to have been particularly quick and nimble at vasectomies was also requested. Though orders for their deputation were passed and the Collector made several telephonic requests for sparing the doctors, four of them were not spared as a camp was organised in the neighbouring District for that very day. Requests to postpone the camp by a day

were of no avail. This was a serious set-back and the Collector had to make arrangements to have them substituted by local doctors though they were not so experienced. It was interesting that the authorities of the district adjoining on the South promptly responded to the request of the Collector, while repeated requests and orders of the Director of Medical and Health Services could not move the authorities of the district adjoining on the North. A request for the services of a gifted and well-known gynaecologist for running the tubectomy camp was made. Indents were also placed for the loan of a thousand surgical towels, some emergency resuscitation apparatus and various drugs. It was hoped that most of the drugs required for the camp could be purchased from the Medical Stores Department economically. The Medical Stores Department did promptly supply some of the drugs required, while it was necessary to go to the open market for the purchase of several others.

On the same day, November 4, 1967, Mr. S wrote to the Health Secretary inviting him to attend the camp on the twentieth and enclosing a copy of his letter to the Director of Medical and Health Services. This invitation was repeated a few days later on the telephone and the Secretary was good enough to be present on the twentieth.

The next day, Mr. S telephoned (and followed up with a letter) the Director of Information and Public Relations, a fellow IAS officer and a good friend of the Collector, informed him of the proposed camp and requested him to see to it that the event was adequately covered by the Press, Radio and the Films Division of the Government of India. The response of the Director was extremely helpful and prompt. He promised, besides making arrangements himself, to get in touch with the Publicity Officer of the Government of India, so that the national press could cover the camp. He also agreed to get in touch with the South-East Asia Correspondent of *Life*. Lastly, he promised to be present at the camp himself. The publicity people of the Government of India did not show much interest—in fact till the last minute the camp was not considered of All-India importance to be covered by the Film Unit and alternative arrangements to have it filmed were made by the Director of Information and Public Relations and the Collector. However,

the Government of India at the last moment relented and sent their cameramen and the camp was in fact covered by an Indian News Review—the function was covered by the All-India Radio—the 7 o'clock Telugu and the 9 o'clock English News bulletins broadcast the news even before the camp concluded and besides this, coverage was given in the national radio newsreel and extensive coverage was given in a radio report of the camp broadcast from the Hyderabad Studio of All-India Radio. It was also covered by the Press Trust of India, the United News of India and several national and local newspapers.

About that time the District Medical and Health Officer wrote a letter to the Executive Engineer, Roads and Buildings to make some minor repairs to the hospital building at Jadcherla and to whitewash it. The Executive Engineer promptly wrote back that he would be unable to do so as there were no funds with him. The District Medical and Health Officer wanted the Collector to write to the Executive Engineer. The Collector discouraged formal correspondence and instead, discussed the problems personally with the concerned officials with excellent results.

When the District Medical and Health Officer and Dr. R, the Deputy District Medical and Health Officer (Family Planning) went to Hyderabad to discuss the camp they hardly got much encouragement from their immediate superiors. In fact, the idea of conducting 1000 vasectomies in a day appeared to some middle-level executives of the Medical and Health Department as lunacy. "Sir, they are unable to conceive of such a large venture," Dr. R bitterly complained to the Collector over the telephone from Hyderabad. The help asked for by Dr. R was grudged and some items flatly refused. When Rs. 1 lakh was asked, only rupees forty thousand was promised. Some of Dr. R's ideas were pooh-poohed and because of departmental discipline, the poor man could not say anything. The powers that be also took unkindly to the Collector's involvement in the camp. "What have these I.A.S. officers to do with Family Planning ?", one of them was reported to have asked. This was conveyed to the Collector and he felt very sad, even angry. He resisted the temptation of complaining about the attitude to the higher authorities.

On the seventh November, when the District doctors and the Collector were feeling somewhat discouraged, a most unexpected thing happened. The Hon'ble Chief Minister of Andhra Pradesh wrote a demi-official letter to the Collector which was as follows :

K. Brahmananda Reddy
Chief Minister

"Ananda Nilayam"
Begumpet
Hyderabad-16

D.O. No. 2189-*DD2/67—Health* 4th November, 1967.

Dear Shri....................

"I am happy to note that the performance of your district during the recent Family Planning Fortnight Celebrations has been commendable. I congratulate you and the officers and staff engaged in Family Planning in the district on this creditable performance. I am sure all of you will continue to evince the same interest and achieve better results in the months to come.

Yours sincerely,
K. Brahmananda Reddy

Sri....................
Collector.

The Collector felt that he had been singled out for a unique gesture of appreciation. This letter did a great deal to revive the confidence and zeal of all the workers in the field and the Collector phoned the senior doctors at the District Headquarters and told them about the letter. It was communicated on the same day to all those engaged in the camp : doctors, revenue officials, Presidents of *Samithis,* Chairman, *Zilla Parishad* and all others. It would perhaps be no exaggeration to say that this unique personal message, as a coincidence, arrived at a crucial time and contributed a great deal to the eventual success of the Jadcherla camp. The District Medical and Health Officer who was repeatedly snubbed in Hyderabad by his departmental superiors and told at least six times in the course of one discussion, that, if there was a single case of tetanus in the camp, he would be held personally responsible, told the Collector, "Sir, had I this letter in my pocket during these discussions, I would have merely shown the letter and demanded various facilities. The letter was an answer to all their doubts and queries and it would have silenced them."

On the evening of November 6, 1967 all the concerned

officials visited Jadcherla and spent about five hours. Every thing was minutely gone into. Arrangements for lodging, food and transporting patients were finalised; so was the layout of the operation theatres, and the operation tables. The reception of the patients, distribution of money and medicines to them, etc., were all gone into and finalised. In such camps, generally a bottleneck was the absence of flowing water which necessitated water being carried in buckets for the doctors washing and scrubbing their hands before every operation. Mr. S suggested that temporary taps should be provided in the *Samithi* building which was to house the theatres. The doctors beamed at the suggestion and the Executive Engineer, Roads and Buildings did not think there would be any difficulty in constructing an overhead tank, pumping water from a near by well and fixing half-a-dozen taps. This proved a boon to the surgeons operating and contributed greatly to the perfect cleanliness and the aseptic conditions that were maintained, besides saving a great deal of time.

When a pair of large hangar-like godowns were suggested for housing about 1000 patients, Mr. S wrote demi-officially to the Managing Director of the State Warehousing Corporation, a colleague belonging to the I.A.S., and the godowns were vacated and placed at the disposal of the camp authorities. A *Zilla Parishad* High School near by was also selected for housing the patients and the Executive Engineer, *Zilla Parishad* got it white-washed. The Executive Engineer (Electricity) provided some temporary lights and the school was closed for the day of the camp by the *Zilla Parishad.*

A plan for the continuous flow of patients to and from Jadcherla was evolved so that there were always enough but not many persons for being operated upon, so that expenditure on feeding could be kept to the minimum and transport arrangements used to the maximum advantage. As patients had to be in Jadcherla ready for operation at twelve midnight on 19-20 November, it was decided to bring those living farther away from Jadcherla (at a distance of hundred miles or so) by the nineteenth evening. The rest were to be collected and fed at their respective *Samithi* headquarters on the nineteenth evening and brought early in the morning on the twentieth to Jadcherla.

The District Treasury Officer prepared a budget for the camp. During the camp he, with special permission and the necessary money, moved to Jadcherla and personally attended to all the disbursements. It was reported that for the Gannavaram Tubectomy Camp some Sub Treasury Officer refused to pass bills.

The Director of Medical and Health Services was requested to depute some of his Family Planning officers to the meeting at Jadcherla on the sixth but unfortunately no one could come because of prior engagements.

The Director of Medical and Health Services suggested that it would be advisable to have the tubectomy camp not in the Jadcherla Hospital as planned originally but in the District Headquarters Hospital. The Collector readily agreed though the programme had already been communicated to the Governor. It was, therefore, decided that the tubectomy patients should be taken directly to the District Headquarters.

The District Medical and Health Officer and the Deputy District Medical and Health Officer (Family Planning) made several trips to Hyderabad to discuss the arrangements with the Director of Medical and Health Services and other officers connected with Family Planning as also to make arrangements for the supply of drugs, surgical towels, additional autoclaves for sterilisation, etc. The day on which the letter of the Chief Minister came, the Deputy District Medical and Health Officer telephoned the Collector from Hyderabad to say that some of the officers immediately below the Director of Medical and Health Services were still critical of the camp and were not extending the required help. The Collector read out the Chief Minister's letter to him and asked him not to lose heart. At about 11 p.m. the same night, the telephone call booked by the Collector to the State Minister for Health matured and the Minister came on the line. The Collector apprised the Minister of the proposed camp, explained the various steps taken and extended an invitation to him to be present at the camp. The Minister welcomed the idea of the camp and wished it all success. He also said he would try his best to be present for the occasion. The Collector explained to the Minister that as patients were being brought from as far as 100 miles away and made to stay at Jadcherla and fed for a day or so, he feared that he might

not be able to confine the expenditure to the limits imposed for individual operations. The Minister said that, if extra funds were required, they would be provided and that no worry need be entertained on that account. It turned out ultimately that the expenditure on the camp was less than what was permissible and some advantage even financially was derived on account of performing many operations at one time. The Collector explained to the Minister that every one who was approached for help had readily extended it and that the Director of Information and Public Relations even promised to get the *Life* correspondent and representatives of the national press through the Government of India. The Minister said that he would also speak to the Union Minister for Health and Family Planning—who was in Hyderabad—and request him to see that the occasion was adequately covered by the Press. On being asked how everything was going on, the Collector told the Minister that he was getting all the help from the Health Secretary and the Director of Medical and Health Services but some middle-level officers were putting spokes in the wheel. The Minister asked the Collector not to worry and promised to straighten out matters at Hyderabad.

Some of these middle-level officers as also those who were specifically in charge of Family Planning in the Directorate of Medical and Health Services did not visit the District or the camp site either before or during the camp. Presumably, they were not inclined to do so or were requested by the Minister or the Director of Medical and Health Services to keep out of it as their presence was not likely to be helpful. There was, however, one welcome visitor, a Deputy Director of Medical and Health Services who was associated with Family Planning. He came to the District Headquarters on November 18, 1967. He was appreciative of all that was being done and planned for the camp. He himself was responsible for the running of the largest tubectomy camp in the country that was just then concluding at Gannavaram. Together with the Collector's wife who was helping to organise the tubectomy and Loop camps, he inspected the arrangements for the tubectomy camp at the District Headquarters hospital. He gave necessary advice to to the doctors and after going round said that everything was perfect. This doctor who came from an entirely different

speciality (he was a reputed thoracic surgeon) showed great enthusiasm for Family Planning work and gave a great deal of encouragement to all the doctors, planning the mass vasectomy camp. He even said some of the arrangements were better than those at the Gannavaram camp which had been planned at the State Government level with its vast resources of men and materials. He went on to say that the camp at Jadcherla would be much more economic and would accomplish as much in a day. (A well-known gynacaelogist who led the team of surgeons at Gannavaram and who conducted the tubectomies in connection with the Jadcherla camp even went further and said the Jadcherla achievement was greater as what they did over two months was done at Jadcherla in a day.)

Arrangements were being briskly made for the camp. The Block Development Officer and the *Samithi* President of Jadcherla got the *Samithi* Office building cleaned, white-washed and distempered as it was to be the main venue of the camp. The Exectuive Engineer, *Zilla Parishad* got the near by *Zilla Parishad* High School white-washed for lodging half the number of patients. The local *Panchayat* office was got ready for the Loop camp. The Divisional Engineer, Electricity got the theatres and the other places electrified. The Executive Engineer, Roads and Buildings got a neighbouring Travellers' Bungalow, ready for the occupation of the Governor and also helped in arranging the water-supply to the operation theatres. The local Revenue Divisional Officer and the Tahsildar worked ceaselessly to arrange huge *shamianas* in front of and behind the *Samithi* building for the patients to be seated before and after the operation. They also made arrangements for the public meeting which was to be addressed by the Governor. The District Supply Officer gathered all the hoteliers of Jadcherla and fixed up with them the feeding of patients, doctors and others attending the camp. The hoteliers were supplied with rice, rava, sugar and milk at fair prices and the hoteliers in turn agreed to charge eighty paise per meal, eighteen paise for a plate of *uppuma* and ten paise for a cup of tea. At this rate, 3757 meals, 2459 cups of tea and 1515 breakfasts were served to the patients. The Deputy District Medical and Health Officer (Health) made all the sanitary arrangements at the lodging places of the patients.

As several temporary structures had been put up of *thattis* at the camp site, the Fire Service Department was requested to provide equipment for putting out fires. They had decided to keep a stirrup pump at the camp-site. In the meantime, it was represented that there was no water supply at one of the camping places of the patients and the presence of a fire engine could solve the problem. The Collector requested the Divisional Fire Officer to see him. As he was away, his Deputy, who was seeing the Collector for the first time, came to him. He said that a stirrup pump was arranged and that would be adequate. The Collector explained to the officer the importance of the camp, the visit of the Governor, the putting up of temporary structures and the desirability of locating a fire engine at Jadcherla for the day. The officer expressed his inability to comply with the request. The Collector then asked him with some heat as to whose orders he required and on being told that the Director had to be approached asked his camp clerk immediately to book a telephone call to the Director of Fire Services. Noticing that the Collector was annoyed, the Deputy to the Divisional Fire Officer said that, if the Collector so ordered, the fire engine would be moved to Jadcherla and that the matter would be reported to the Director for ratification. A little later he said even ratification might not be necessary. The Collector then asked that the telephone call be cancelled.

The presence of the fire engine at Jadcherla was a great help to the running of the camp. Reference has already been made to the efforts that were made to provide running water to the operation theatres. On the nineteenth night, it was found that because of the depth of the well, water could not be pumped up to the overhead tank even by powerful pump sets. All the efforts at improvising taps, etc., were threatened with failure. The Executive Engineer was toying with the idea of employing ten or fifteen labourers for carrying water up ladders and filling the overhead tank. Mr. S, who was on the camp site then thought that only the fire engine could come to the rescue. He went across to the *Zilla Parishad* school where the fire engine was located, explained the situation to the Officer-in-charge—a very helpful young officer—and requested him to station the fire engine at the well near the operation theatres and while waiting for any emergency, keep pumping up water

to the overhead tank. This solution worked and its efficiency was realised when early on the twentieth morning the well ran dry and surgery had to be suspended for a couple of hours.

On November 19, 1967 private lorries were obtained by the Superintendent of Police and the Motor Vehicle Inspector at the various places from which patients were to be transported. Each vehicle was paid Re. 1 per mile and the drivers and cleaners were paid *batta* of Rs. 4 and Rs. 3 per day as during General Elections. A large amount of money was drawn and placed at the disposal of the Superintendent of Police for engaging lorries. As the transport costs had to be kept down, as many large departmental vehicles as possible—those of Public Works Department, Agriculture, Fisheries, Irrigation, etc., were pressed into service.

The Block Development Officers and Tahsildars were instructed to draw up a route map, collect patients from groups of villages at points *en route* with the help of block vehicles, bullock carts, etc., and bring them along to Jadcherla in lorries. The securing and deployment of vehicles required all the attention of the Superintendent of Police. On November 19 and 20, he was stationed at the operation theatre (*Samithi* office) building to which a telephone extension was specially provided and he was constantly on the phone. Vehicles were sent to places after information came that sufficient number of persons had collected. Many were the frantic calls of Revenue Divisional Officers and Block Development Officers for more vehicles. The smaller vehicles like jeeps, etc., were sent into the villages to collect and bring patients to pre-determined points and from there they were transported to the camp by lorries. A distinct shortage of vehicles to transport patients from villages to *samithi* headquarters was felt. There were also delays in lorries going along the pre-determined routes—as they instead of jeeps were also sent in some cases to villages to collect patients because jeeps were in short supply—and those who had collected along the route in some cases had gone back to their villages after waiting for some time. In a few cases there was propaganda against Family Planning and persons who had got into the lorries were made to get down. The number of vehicles engaged was kept to the minimum in order not to exceed the budget and this resulted in our losing about 300 patients. Many who had

to be collected from villages were left behind. In a few cases the patients were so frightened by anti-propagandists that they ran away from their villages. More intensive and repeated combing of the villages and pressing more vehicles into service—especially jeeps which could be taken to villages—would have produced more patients. As it was, out of 3896 cases registered, only 1700 were brought to the camp site and after some persons were rejected, 1564 were operated upon.

The anti-propagandists, however, were firmly told to keep clear of the camping place and the operation theatre building and the Collector and the Superintendent of Police promised to take them for a ride a few miles away, if they transgressed.

Invitation cards in the name of the Collector were issued to the public function to be held on the evening of November 20, 1967. On November 17, the Director of Medical and Health Services called for a press conference at Hyderabad and announced the holding of the camp.

By the nineteenth evening, patients started arriving. Several trunk calls were booked to ascertain the position and where there were no telephone and telegraph links, the Police wireless was used. The Secretary, *Zilla Parishad* and the District Social Welfare Officer received the Block Development Officers with their parties of patients and directed them to the dining halls, operation theatres, etc.

The Director of Medical and Health Services arrived on the nineteenth evening. He was accompanied by the Principal of a Medical College who was also a noted surgeon and the Chief Anaesthetist of the biggest hospital in Hyderabad. Both these senior doctors, it appeared, were sent under the instructions of the Health Minister for supervising the arrangements and for being of help in emergencies. They went round the camp, and remarked that the arrangements were perfect. The Director of Medical and Health Services gave some instructions to the Deputy District Medical and Health Officer (Health) for improving the sanitary arrangements. About the medical and surgical arrangements, no improvements could be suggested. After dinner, the Superintendent of Police, the Collector's wife and the Collector left for Jadcherla and arrived there almost at the stroke of twelve. The operations were scheduled to start at midnight. They went round the operation theatres. Patients

on tables were ready to be operated on and at the stroke of twelve, operations started. The Collector spoke to some of the surgeons and encouraged them. He told them to take their own time. The Collector's wife stationed herself in the *shamiana* for the operated persons. Those who were operated upon were taken along to tables at which some medicines were administered; other medicines were given to be taken home along with clear instructions, money for loss of wages was disbursed and do's and don'ts explained. The patients were told to rest in the *shamianas* for half an hour when they could be under observation. There were three or four doctors keeping a watch, administering injections where necessary. The patients were given a hot cup of milk before they went in for the operations and were given another cup after the operation. The milk came from the Red Cross stocks.

A quick method of surgery was evolved in that District and each operation took only about three minutes. It was admired by the senior surgeons from Hyderabad.

The Deputy District Medical and Health Officer (Family Planning) at about 12-30 a.m. came to the Collector and said in an agitated manner, "Sir, I don't think we can do so many operations. I don't think we can do 600 by morning." "Don't worry, doctor, let us do as many as we can. Please go and tell the doctors, everyone of them, to go slow, to take their own time. There is no hurry whatsoever", the Collector told him. The Deputy District Medical and Health Officer went into the theatres and advised the surgeons accordingly. He came back after twenty minutes and beaming with a smile said to the Collector "Sir, I think we can do it, everything is O. K. now."

The Collector and the Superintendent of Police spoke to the hundreds of patients who were assembled waiting to be operated upon about Family Planning and appreciated their wisdom in having volunteered for the operation. "Sir, there are many more where we came from and when they know we have been operated upon safely, they will come," "We have had too many children, we can't afford to have any more in these days of soaring prices" were typical comments. All of them were anxious to get operated upon as soon as possible. Some complained that those who came after them were taken

up first. One man complained so incessantly that he was sent in for the operation, out of turn. The operations were taken up in batches, *Samithi* wise. The Block Development Officers and, in some cases, the Presidents of *Samithis* were there looking after the persons from their *Samithis,* ensuring that they were fed, lodged, operated, given the necessary medicines, and money and attended to in emergencies. They took charge of them from the beginning to the end and they brought enough assistants to help them. By the time it was 1 a.m., a hundred persons had been operated upon and this pace of a hundred operations per hour was kept up.

The patients waiting to be operated were entertained to music and film shows.

At about 1 a.m., some of the patients who were operated began feeling giddy. Various injections were given to them but the number of those feeling giddy increased. The Collector, the Collector's wife and the doctors in the post-operation *shamiana* attended to such persons. The Collector got a room in the building vacated and said that it should be used only for the resuscitation of cases developing serious complications. A senior Deputy District Medical and Health Officer was put in charge of such cases. The Collector asked the Deputy District Medical and Health Officer (Family Planning) to investigate into the reasons immediately—whether it was the fault of a particular surgeon or his team. They soon traced the trouble to a bottle of Xylocaine which was immediately taken out of use. So were the other bottles of that batch. Even at the outset to prevent possible penicillin shock, Madribon tablets and Nebasulph powder were used and penicillin was dispensed with. This treatment had been approved earlier by leading doctors at Hyderabad. Fourteen doctors, each assisted by three para-medical personnel performed the operations between twelve midnight and six a.m. Another batch took over from 8 a.m. to 1 p.m. and the first batch resumed at 2 p.m. and carried on till 8 p.m. In all, thirtytwo doctors and one hundred para-medical personnel were on duty in shifts. As some doctors, contrary to instructions, came without their para-medical help, last minute arrangements had to be made. One of the para-medical personnel in each team helped the doctor in the operation, one ward boy prepared the

patients for the operation and tied the bandages after the operations, while the third washed the instruments and sterilised them. Each doctor had three sets of instruments, each set in a kidney tray. A separate tray with emergency drugs was on hand. Arrangements were made for continuous sterilisation of instruments. Each doctor was also provided with two bins of sterile towels and one bin of sterile gauze and thread. 1400 towels, 20 bins containing gauze, cotton packing, thread, etc., were all autoclaved with special indicator tubes attached for ensuring proper sterilisation, in the District Headquarters hospital and carefully transported to the operation theatres. Sterilized towels and equipment were thus used for all the operations.

The patients carried printed cards containing all statistics about them. These had been filled in at their respective starting points. As and when they were operated, medicines and instructions were given, or money was paid, entries were made on their cards. It was thus ensured that they were not bothered with unnecessary questions before or after the operation, and that everyone of them was given all the necessary medicines and attention.

A large score board was set up in the *shamiana* in which the score of operations performed was noted from time to time. The Collector during the early morning hours spoke to some, thanking and encouraging them, while pulling up others who failed to bring the patients they promised. A *Samithi* Block Development Officer and President who promised to bring 600 but brought none were strongly advised to do better. This had some effect and, by the next day, this *Samithi* produced 135 cases for vasectomy.

While the vasectomies were in progress at the District Headquarters hospital, ten miles away, the women brought for tubectomy were all individually examined on the nineteenth night. By next morning, seven of these who were examined and who were to have been operated upon, ran away from the hospital. Between 8 a.m. and 1 p.m. on November 20, fortyone tubectomies were performed. The surgical team was headed by a Professor of Obstetrics and Gynaecology and Head of the women's section of a well-known hospital in Hyderabad. Even in the Hyderabad City, women usually flocked to be

examined by this doctor. The village women were told that they would be in the best hands possible and this also helped in registering cases for tubectomy. This lady doctor was helped by two other lady surgeons and two anaesthetists. The surgeon of the local District hospital, a Master of Surgery, his wife, also a doctor, and another were helping the visiting team, while the Superintendent of the hospital was in overall charge of the camp arrangements. The local doctors who helped the visiting team got trained during the morning and even performed one or two operations. The operation itself, a major operation, took hardly five minutes. In that district, fortytwo tubectomies were performed between April 1, 1967 and November 19, 1967 all on the third or fourth day after delivery. On November 20, fortyone tubectomies were performed in five hours and that too on women who had not had a confinement immediately before the operation. On the day of the operations, the visiting Senior Surgeon (and Principal of the Medical College) and the Chief Anaesthetist came to the District Headquarters hospital and had a look at the excellent manner in which the surgery was progressing.

They were followed by the Governor's wife conducted by the Collector's wife who went into the operation theatre and watched the operations. The visit of the Governor's wife was arranged at the last minute, though it meant dislocation of their programme, in order that the patients as well as the doctors might feel encouraged. Immediately afterwards they were interviewed by the All-India Radio. Later, the Governor's wife was taken back to Jadcherla where she inaugurated the Loop Camp run by the *Andhra Mahila Sabha.*

Out of fortyone tubectomy cases, only one woman developed temperature for three days. Otherwise, it was an uneventful week that followed. While they were recovering from the operation, the fortyeight children and five husbands who accompanied the ladies, as also the Health visitors who brought them from the villages were lodged and fed in the *Andhra Mahila Sabha.*

On the sixth day, the stitches of the tubectomy cases were removed in the presence of the Collector's wife and the Superintendent of the hospital. A most unexpected and extraordinary thing happened immediately afterwards. All the

convalescing women danced and sang round the Collector's wife and the Superintendent. This was filmed by the local photographer who also took a movie of the vasectomy camp. The women and children were transported back to their homes.

At the vasectomy camp at Jadcherla the operations continued without interruption till 6 a.m. on the twentieth. Then the theatres were all washed and cleaned and, by about 8 a.m., the second batch of doctors and para-medical men took over. This was to some extent delayed by the lack of running water, the supply of which was resumed after the fire engine was repaired by the local police mechanics.

On the twentieth morning at 10-30 a.m., the Governor and his wife arrived at Jadcherla from Hyderabad. They were received by the Collector and the Health Secretary. The District officers, leading non-officials and the Press who had come to cover the occasion from Hyderabad were introduced to the Governor. The Health Minister also arrived at Jadcherla on the twentieth morning.

The Governor talked to the Health Minister, the Health Secretary, the Director of Medical and Health Services, the Senior Surgeon, the Chief Anaesthetist and others about the camp and Family Planning in general. The reports of the senior doctors were that the camp was running perfectly. While the Governor's wife was visiting the tubectomy and Loop camps, the Governor and the Health Minister were conducted round the vasectomy camp by the Collector. The Governor watched the operations and the Principal of the Medical College was in raptures as he described the method of surgery—a local innovation—that was being adopted. The Governor visited all the five operation theatres. News had spread in the villages that the Governor would be gracing the occasion. The Governor's visit was widely publicised by those who were engaged in registering cases. The Governor spoke to the patients in the *shamianas*. Later, when he visited the places where the patients were lodged, a spontaneous cheer went up for him.

During the course of the day, the condition of one person operated for vasectomy caused anxiety. Though those who were medically unfit or those who were otherwise considered unqualified were rejected—in all 142 persons—it so happened

that one person who had heart trouble was operated. It was said that the use of xylocaine with adrenalin created complications. This patient was brought round by the Chief Anaesthetist with consummate skill. While the young doctors who performed vasectomies were, by and large, likely to have panicked, the experienced and senior doctors who were on the scene took such a case in their stride and dealt with it superbly. It was this which gave tremendous confidence and strength to the doctors and organisers as the camp progressed. It would, however, be true to say that the organizers felt a good deal of anxiety and kept their fingers crossed till the camp ended.

The Collector had heard from Block Development Officers that even in camps in which 500 to 600 vasectomies were performed, after-care was frequently neglected. He was, therefore, particular that individual attention must be paid to each of the operated persons, that they must be visited by the Malaria Eradication Health Workers, Village Level Workers and others in their villages and that sutures must be removed by doctors in convenient centres. The doctors were made responsible for after-care and he requested the Director of Medical and Health Services to sign individual demi-official letters, explaining the importance to the doctors entrusted with the job and enjoining them to take the maximum care. Another innovation that was made was the deduction of a rupee per case from the fee payable to the surgeon performing the operation and paying it to the doctor who removed the sutures and attended to after-care. Emergency drugs were stored in all the Primary Health Centres, and it was perhaps because of this as well as of the care taken throughout, that there was not a single case of complications. Two days after the camp, the Collector in his tour, heard that one doctor asked one of those operated to buy and bring some injections that he needed. The Collector spoke to that doctor and got instructions issued to all doctors in the district that all medicines required for after-care should be purchased from Family Planning funds.

If the Jadcherla camp was the climax of the Family Planning effort in that District, the climax of the camp on twentieth November was a public meeting which was addressed by the Governor, the Health Minister and others. The meeting was very largely attended and prominent places were reserved

for those who were operated and those who performed the operations. Besides the Governor, his wife and the Health Minister, the Health Secretary, the Director of Medical and Health Services, the Collector and the Chairman of the *Zilla Parishad* were accommodated on the dais. The Collector who spoke first welcomed the distinguished guests and made the announcement of the setting up of a new world record—some 1200 vasectomies being performed in a single day. He also explained the reasons for organising the camp. The main aims, according to him, were to demonstrate that vasectomy was a safe, simple and minor operation and to instil a sense of confidence in the people about the operation so that people would themselves come forward for the operation in future. The Chairman, *Zilla Parishad* also welcomed the guests and explained how non-officials and officials had cooperated in organising the camp. The Health Minister who spoke next said, "I here and now, on behalf of the Government of Andhra Pradesh, authoritatively, congratulate all those who are connected with organising this camp." The Minister went on to explain the urgent need for accelerating Family Planning programmes.

The Governor who spoke afterwards describing the camp as "magnificent" said, "First and foremost, I would like to congratulate all those who have contributed to the success of this camp on their splendid feat in setting up a new All-India and possibly a world record for operations done at a camp in one day. As you have heard, 1200 vasectomies have been performed so far and more will be added before the day is over. This indeed is a creditable performance, when one remembers that the existing record is some 326 operations done at Shamirpet in Hyderabad District. The district authorities also deserve to be commended for organising the first tubectomy camp in Telengana." "If results of this magnitude are to be achieved, it is necessary first and foremost that we capture the imagination of the public—men and women, those living in villages as well as those living in towns. I consider that a camp of this nature makes a significant contribution to that end. We have to plan boldly and execute our plans with faith and courage. We cannot afford a half-hearted attitude." Adding that the camp was an example worthy of emulation, the Governor concluded, "I am sure the lessons learnt in the organising and running of this camp

will be carefully studied and made use of in other places. Once again, I would like to say how happy both of us are to be in your midst and to associate ourselves with this camp at which perhaps history has been made." Departing from the prepared text, the Governor was pleased to compliment, even shower praise, on the Health Minister, the Health Secretary and the Director of Medical and Health Services, the Collector and others for their good work.

Dr. R, the Deputy District Medical and Health Officer proposed the vote of thanks. This was around 7-30 p.m. The news of the achievement was splashed over the All-India Radio in the news bulletins of 7 p.m. and 9 p.m. on the same day.

The words of the Minister and the Governor came as a very rich reward to the Collector and his colleagues who had collaborated in the venture. Many of them regarded November 20, 1967 as the greatest day in their careers.

The Governor, as he was leaving the meeting that day was seen off by the Health Secretary, the Director of Medical and Health Services, the senior surgeons, the leading non-officials and the Collector, the Superintendent of Police and others. After shaking hands with the Health Secretary and the Director of Medical and Health Services, the Governor held the Collector's hand for a while and said to the others, "He is a very, very. . . . . . The Director of Medical and Health Services said, "dynamic person." The Governor considered it for a couple of seconds and said, "All right, I'll take it for want of a better word".